

InstaTop

Capstone Project Report

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Disclaimer	4
Executive Summary Resume	7
Section 1: PROJECT AND COMPANY DESCRIPTION	8
1.1. Description of the company's business and the project current status	8
1.2. Customers' Problems Definition	8
1.3. Resume of company's Strategic Plan (based on the analysis detailed in chapters further)	8
1.4. Analysis of Business Model based on Canvas Business Model	9
1.5. Overview of company's development/implementation plan	10
Section 2. TECHNOLOGY	12
2.1. The basic assumptions of the research based on the MBAI Capstone	13
2.2. The model description based on the MBAI Capstone	16
2.3. Analysis of the research results based on the MBAI Capstone	18
2.4. Recommendations based on the MBAI Capstone	20
Section 3: MARKET ANALYSIS	23
Influencer Marketing	24
Martech	24
Social Networks	24
Key Insights	25
Overview of the competitors	25
3.2. Overview of best practice approaches in the market/segment	26
3.3. Overview of trends (technological, innovation, etc)	26
1. Technological: Internet Penetration	26
2. Technological: AI	27
3. Legal	27
4. Social: changes in the population & demographics	27
5. Disclaimer due to COVID-19	28
3.4. Overview of alternative uses of company's product/service on the market	29
Section 4. SALES AND MARKETING	30
4.1. Overview of products' formats and segmentation	30
Segments and positioning for Base product	31
Target segments	31
Segments and positioning for Premium product	32
4.2. Description of marketing mix	40
Product	33
Place	34
Price	34
Promotion	35
4.3. Overview of sales channels	40

4.4. Resume of strategic positioning	40
4.5. Sales plan	40
4.6. Pricing analysis and benchmarking with competitors	40
4.7. What has been done so far and what's planned	40
Section 5: ORGANIZATIONAL PLANNING	42
5.1. Organizational structure (diagram + description)	44
5.2. Personnel management	44
5.3. Overview of Personnel and HR policies	44
5.4. Overview of personnel recruitment needs and sources	44
Section 6: FINANCIALS	46
6.1. Financing requirements summary	51
6.2. Purposes of financing for 1 year, for 5 years (summary) + description	51
6.3. Overview of forecasted Capital Expenditures	51
6.4. Overview of Operating Expenses forecast	51
6.5. Overview of Profit and Loss Statement	51
6.6. Overview of forecasted Balance Sheet	51
6.7. Overview of forecasted Cashflow Statement	51
6.8. Overview of the financials in case of pessimistic scenario	51
6.9. Startup valuation - First Chicago Model	51
Section 7: SUPPLEMENTS	52
7.1. Market Research Data tables	76
7.2. Macroeconomics research	76
7.2.1. Economic factors	54
7.2.2. Social factors	54
7.2.3. Technological factors	56
7.3. Risk assessment and mitigation	57
7.4. List of diagrams and pictures	59
7.3.1. Global digital population as of January 2020 (in billions)	59
7.3.2. SWOT analysis	76
7.3.3. Business Model Canvas	60
7.5. List of graphic materials from sources used in MBAI capstone	61
7.6. List of abbreviations used	73
7.7. List of terms used	76
7.8. List of sources	76
7.9. List of literature used	76
7.10. Notes	77

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Executive Summary Resume

This capstone project shall provide the technological and business underpinning for the launch of InstaTop — an AI-based analytics tool for Instagram. InstaTop company will be established by the two co-founders — Anna Shvetsova and Natalya Pedchenko — creators of the product idea.

The technology applied is based on the research performed in 2019 as a part of the MBA I capstone project aimed at getting to know the audience of Instagram — the fastest growing social media platform in the world. The data analysis techniques used comprise exploratory data analysis of 920 Instagram accounts — the most popular among Ukrainians, and sentiment analysis of 2.2 mln user comments. The research has generated data driven conclusions on the Instagram audience features and needs.

The pain of an Instagram user is complex, time consuming and often merely experimental content planning with no guaranteed results. The pain of small businesses is lack of time and/or expertise to understand the trends and keep up with them. InstaTop's disruptive business model shall kill the customer's pain by providing a fast and moderately priced technological solution.

InstaTop belongs to the industry of Martech, which accounts for 160 Martech startups in Ukraine and 7,040 — worldwide, and grows at the rate of 67% per year. The number of social media analytics tools in general is huge, but none of them offers the product with the same functionality as that of InstaTop. The closest competitor is Socialbakers.

The company's strategic goal is to become a leader of AI-powered SMM solutions in CIS countries, USA and UK. It will be achieved by building sustainable competitive advantage through differentiation. AI-powered technology and good analysis of the Russian language will be the main points of difference for InstaTop in 2020-2024.

InstaTop will hire internal Product and Data Science teams, while SEO, marketing and recruiting functions will be outsourced. The founders will perform top management functions at the newly established business entity.

To start the company the founders are expected to raise USD 350,000 from two equity investors. The funds received will be used to cover the costs of the first 6 months of operations. InstaTop will start generating profits during year 2 upon the launch of its Base and Premium Products during year 1 and will pay the dividends (50% of the profit) on an annual basis starting from year 2. The estimated return on investment is 2.8 times in 3 years.

The company will generate positive cash flow starting from year 1 and will hold large amounts of cash and cash equivalents on its accounts, thus creating value for investors and staying steadily solvent.

The Covid-19 pandemic outbreak was announced in March 2020 causing the global recession to start. The founders assume that such a turn will result in an increasing number of people potentially interested in SMM tools. The highest risk for InstaTop seems to be related to the potential cuts of marketing budgets in 2020 due to the pandemic. The threat is strong, but it is not relevant for the company during the first 2 years of operations. The B2C product will be InstaTop's initial focus, which has no direct relationship to the decreasing marketing budgets of corporations.

Section 1: PROJECT AND COMPANY DESCRIPTION

1.1. Description of the company's business and the project current status

InstaTop is an AI-based analytics tool for Instagram to be launched by the company of the same name. InstaTop company will be established by the two co-founders — Anna Shvetsova and Natalya Pedchenko, who invented the idea of the product and will take up the functions of the acting CEO/CFO (Natalya Pedchenko) and CMO/PO/Business Development (Anna Shvetsova). InstaTop will be incorporated under the laws of Ukraine in the form of a Limited Liability Company. The initial ownership structure foresees the equal distribution of shares between the two founders: 50% — Anna Shvetsova, 50% — Natalya Pedchenko. The ultimate ownership structure will be different depending on the amount of investors' capital raised, but the founders' strategic approach is to keep at least 51% of their ownership in the company.

1.2. Customers' Problems Definition

InstaTop potential customers — Gen Z Instagram bloggers and Private Entrepreneurs from specific sectors— have the similar goal: make their/ their customer's account popular. Being popular for Gen Z also means the ability to make money by publishing sponsored content on their accounts. For Private Entrepreneurs online presence means not only additional customers, but also reputation management and brand awareness. Social Media changed the way how purchasing decisions are made and businesses need to adjust to the new trends.

The table below demonstrates the pains and the painkilling solutions offered:

	B2C	B2B
Problem	1. Complex, time consuming and often merely experimental content planning with no guaranteed results.	
		2. Lack of time and/or expertise to understand the trends and keep up with them.
Solution	1. The AI-based analytics tool will both analyze the content and behavior of the most successful Instagram accounts in a category, and measure the content performance based on specific key metrics. Customers will receive content plan suggestions comprising only the best performing content creation ideas and promotion instruments, proved by the best players in a category.	
		2. The AI-based analytics tool will analyze a big number of accounts in a specific niche and generate content strategies based on current trends.

1.3. Resume of company's Strategic Plan (based on the analysis detailed in chapters further)

The vision of the company is:

“People use InstaTop whenever they feel the need to improve the popularity of their

accounts”.

The mission of InstaTop is:

“Helping our customers to stand out”.

InstaTop has developed the following strategic goals for the period defined by this capstone project (2020-2024):

- to become a leading provider of AI-powered SMM solutions in CIS countries, USA and UK in both B2C and B2B segments with 0.5% share of paying customers from the total number of the target audience for the Base product, convert 0.1% of Base product users into Premium product users and reach 0.1% share of the B2B segment with Premium product by the end of 2020;
- to keep the leadership position during 2022-2024 by constantly reinventing the product and the business model to generate the sales growth at 87% per year;

The strategic goals will be achieved by building the company’s sustainable competitive advantage through differentiation. **AI-powered technology and good analysis of the Russian language** will be the main points of difference for InstaTop in 2020-2024.

The company’s fast growth will be reached by implementing the following growth strategies:

- Diversification strategy during year one — launch of the Base and Premium products;
- Market Development strategy during years 2-3 — entering new geographic areas;
- Market Penetration strategy during years 4-5 — gaining customers from competitors, increasing retention rate and frequency of purchases from existing customers.

1.4. Analysis of Business Model based on Canvas Business Model

Key Partners

- Key partners are: Recruitment agency, Marketing agency, SEO agency.
- Key suppliers are: hosting (website) and cloud (data analysis) providers, PR resources, CPA networks and Ad suppliers (Facebook ads & Google Adwords).

Key Activities

- Key activities: Data analysis, Product development, Support, Marketing, SEO.

Key Resources

- Key physical resources: powerful computers for employees.
- Key human resources: CTO, data scientists, SMM managers, developers and an accountant.
- Key financial resources: USD 350,000 of investors’ capital.

Unique Value Proposition

- Value Proposition for the Base product: content plan suggestions with proven success.
- Value proposition for the Premium product: content strategy based on trends in niche specific to each customer.

Customer Relationships

- Intuitive product and creative guidelines;
- Premium — dedicated SMM managers;

- Customer service (emails, chat);
- Communication in Social networks.

Channels — path to customers

- Awareness: digital advertising & PR channels;
- Evaluation: samples of plans and strategies;
- Purchase: subscribe on the website or in iOS/Android apps;
- Delivery: PDF format and iOS/Android apps;
- After sales: customer support (live chat, email);

Customer Targets/Segments

Base (B2C)

- Gen Z Non-specific topic Instagram bloggers;
- Gen Z Specific topic Instagram bloggers;
- Gen Z Users of Facebook/Instagram (secondary);

Premium (B2C and B2B)

- 0.1% of Base product users ;
- Micro-companies, private entrepreneurs

Cost Structure

InstaTop — Value Driven company, focused on value creation & premium proposition.

Year 1 TOP cost drivers:

- 64% — product development personnel (COGS);
- 13% — legal and marketing payroll;
- 10% — advertising costs;
- 6% — office (rent, supplies, utilities & internet).

Outsourced functions: marketing, SEO, recruiting

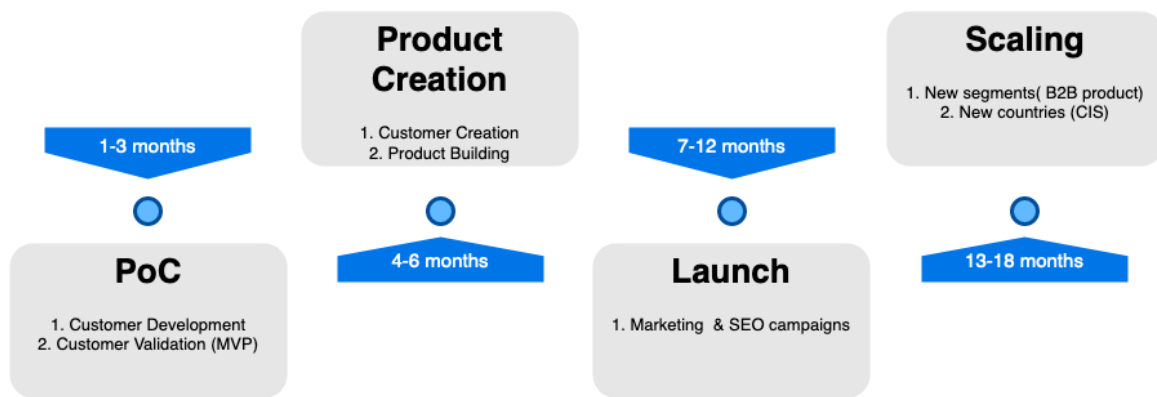
Revenue streams

- Subscription fees;
- Customization fees.

For visualization, please, refer to [7.4.3. Business Model Canvas](#) table in the List of diagrams and pictures section 7.4.

1.5. Overview of company's development/implementation plan

InstaTop uses Lean Startup elements in its approach to product development and implementation.



Stage 1 (1-3 months) - Develop PoC (Proof of Concept)

During the first stage we expect to validate our Business Model ([see Value Proposition Canvas in Section 1.4.](#)) by formulating and validating our product-related hypotheses.

1. Customer Development:
 - 1.1. Run quantity research (through open & closed questions);
 - 1.2. Adjust Business Model;
 - 1.3. Run quality research and research the competitors;
 - 1.4. Adjust Business Model;
2. Customer Validation (MVP):
 - 2.1 Create MVP (Minimum Viable Product);
 - 2.2. Receive feedback from beta-users;
 - 2.3. Adjust MVP.

Stage 2 (4-6 months) - Create the Base Product:

3. Customer Creation:
 - 3.1. Adjust Value Proposition;
 - 3.2. Adjust Marketing Strategy.
4. Build the Product.

Stage 3 (7-9 months) - Launch the product

5. Launch test marketing campaigns to measure CAC (Customer Acquisition cost, ROI (Return on Investment) and CR (Conversion Rate) of each channel.
6. Receive & Integrate Customer feedback.
7. Update Sales plan and P&L projections.

Stage 4 (10-12 months) - Scale

8. Scale the successful campaigns.
9. Test new Markets (English speaking countries).

Refer to the "Implementation plan" tab in the Financial plan document for more details.

Section 2. TECHNOLOGY

The research performed in 2019 as a part of the MBAI capstone was aimed at getting to know the audience of Instagram — the fastest developing social media platform in the world.

Specific objectives included:

- perform research of Instagram data collected, and
- issue recommendations on effective communication with the defined emotional echo chambers.

The technology applied consisted of the following steps: a) selecting 1000 most popular Instagram accounts ('influencers') in Ukraine; b) downloading 2 recent posts of each influencer with the users' comments; c) performing EDA and sentiment analysis of the comments; d) extracting the keywords; e) visualizing emotional word clouds of the posts; e) drawing up data driven conclusions on the Instagram audience features.

The recommendations are based on a) content analysis of the keyword clouds; b) practical communication techniques built upon the conclusions derived from the research.

The key findings of this research are:

- Instagram has the highest level of the audience engagement among all the social networks (2-7%), the youngest audience (71% of users are younger than 35 years old) and the fastest growth (plus 4.4% of the audience quarterly);
- Ukrainian users are not involved into the global Instagram context;
- Influencers are a part of Instagram business model and the most valuable producers of the user-generated content as they are engaging users to make actions and produce their own content not being directly paid for by Instagram;
- The size of an influencer's audience and engagement rate are negatively correlated: as the audience grows, the personal connection and the feeling of the audience get diluted as a consequence of the larger number of followers;
- Ukrainians prefer to follow the most engaging influencers, not those with the largest audience only;
- The companies using Instagram as just another broadcasting tool have big audiences (due to wide TV presence mostly), but the niche bloggers generate the highest engagement;
- Ukrainian Instagram audience tends to use Russian language: 53% of influencers popular among Ukrainians are from Russia, 82% of influencers produce content in Russian;
- The majority of the influencers popular among Ukrainians belong to the spheres of Fashion/Beauty/Modeling (29%), Music/Dance/Entertainment (19%), Video-bloggers (9%) and Actors/TV hosts (8%);
- The general tone of the most popular Instagram accounts in Ukraine is overwhelmingly positive (about 89% of the positive or neutral comments in Russian).

Hence, the following recommendations are offered for more effective communication:

- In building communication with the young audience the content produced shall be to the maximum extent interactive, not informative;

- Public figures/entrepreneurs/politicians must become digital influencers by building personalized highly interactive ‘niche’ Instagram accounts;
- To be successful in Instagram it is important to do something youngsters want thus bringing the maximum value for the audience;
- A potential influencer shall genuinely become a part of the crowd he/she is trying to reach (look, speak, get interested, love what they do, etc.) and/or involve existing influencers into the joint activities;
- It is essential to get youngsters into the influencer’s team, who will assist in shaping his/her communication strategy and be the first test group to evaluate if the content ‘flies off’;
- An influencer-to-be shall partner other Ukrainian influencers to promote each other and Ukrainian Instagram context as well;
- To build a solid following, a potential influencer shall produce positive emotional content, even though he/she may be promoting serious things.

2.1. The basic assumptions of the research based on the MBAI Capstone

The research performed in 2019 as a part of the MBAI capstone was linked to exploring the audience, changing in terms of both generation composition and communication habits. It presents the overview of some population segments in Ukraine and the information sources they use. The key insights from this research were used to create the InstaTop digital instrument.

2.1.1. Population composition in Ukraine — the trends

Although the global trends show the overall population aging, life expectancy of Ukrainians is far from that of the developed countries. The following analysis shows the change in population composition in the next 5-15 years.

The State Committee of Statistics accounts for 9.8 million citizens of the age group 60+ years old (6.3 million — females, 3.5 million — males)¹, and 7.6 million Ukrainians of the age group 0-17 years old (as of January 2019).

Life expectancy of the Ukrainian men is about 66 years and that of the women is about 77 years based on the research of The Institute for Health Metrics and Evaluation (IHME — an independent global health research center at the University of Washington)².

The math behind the expected population dynamics in the coming years is basically straight forward:

- by the end of 2025 more than 1/3 of citizens currently belonging to the age group 60+ will pass away (males);
- by the end of 2036 all the citizens currently belonging to the age group 60+ will be replaced by the Ukrainians currently comprising the age group 0-17 (consequently the number of people will shrink by more than 2 million people).

It is also worth mentioning that replacement of the generations in Ukraine will happen earlier and faster than that in the developed countries, since the average life expectancy of the Ukrainian citizen is 8-10 years less.

¹ http://database.ukrcensus.gov.ua/MULT/Dialog/statfile_c.asp

² <https://vizhub.healthdata.org/le/>

In prototyping products and services it makes sense to pay attention to the younger audiences of generations Y and Z, since in the nearest future they will become the workforce and the most active part of the population.

2.1.2. Information consumption in Ukraine — the trends

In the beginning of 2019 74% of the Ukrainians indicated TV as their key source of information based on the research by KMIS³. Despite the figure seems to be very high, it has been steadily dropping: in February 2018 86% of Ukrainians were actively watching TV, and in 2017 — more than 90%.

Other sources Ukrainians consume are online media (27.5%), social networks (23.5%) and close ones and relatives — read ‘rumors’ (10.6%). Social networks and rumors are inter-related to some extent, since the latter are scaled by the first⁴. Adding up those three brings us to the cumulative 61.6% of mostly digital ways of receiving information. The latter two make up 34.1% of the Ukrainians obtaining information from social networks and rumors scaled by social networks.

Global situation shows similar trends: in the USA, for example, the share of Americans getting news from online sources and TV are comparable (49% — TV, 43% — online media or social networks combined)⁵. Both global and local Ukrainian trends demonstrate the sharp drop in TV information consumption, and slow growth in the digital one. It may be explained by the aging audience of TV viewers and their gradual passing away^{6 7}.

The current state of play makes it reasonable to pay attention to the growing share of social media as a source of information. According to the ‘Digital 2019: Global Digital Overview’ by Hootsuite, 66% of social media audience is younger than 35 years old⁸. This fact together with the expected population dynamics (inflow of generation Z to dilute and further replace Baby Boomers) makes it critical to understand the discourse in the youngsters’ ‘virtual habitats’. Basic understanding of social media communication instruments, as well as the audience behavior and preferences, will give a chance to traditional businesses to stay relevant for the younger generations, and for the new ones — to market their products effectively.

2.1.3. Social networks — the overview of Instagram in Ukraine

Among the most popular social networks the highest growth in absolute and relative numbers show Facebook (plus 37 million active users or 1.7% of the audience quarterly) and Instagram (plus 38 million active users or 4.4% of the audience quarterly). Based on the total number of active users, Facebook is #1 social network (2.3 billion users) in the world, while Instagram is #3 (1 billion users). However, the audience of Instagram is younger than that of Facebook: 71% of Instagram users are younger than 35 years old, while only 65% of Facebook users are younger than 35 years old. For the purpose of the current project we are more interested in a

³ <https://nv.ua/ukr/ukraine/events/telebachennya-vs-socmerezhi-zvidki-ukrajinci-berut-informaciyu-i-yakim-dzherelam-dovirayut-50016100.html>

⁴ <http://m.day.kyiv.ua/uk/article/media/susid-zamist-televizora>

⁵ <https://www.pewresearch.org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in-the-u-s-as-a-news-source/>

⁶ <https://medium.com/@MarketMadhouse/baby-boomer-die-off-threatens-trump-and-oprah-c1e3d6fc17ff>

⁷ <https://nv.ua/ukr/publications/tb-vtrachaje-molodu-auditoriju-i-bere-orijentatsiju-na-pensioneriv-88674.html>

⁸ https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide

faster growth (as a trend) and wider youngsters' presence, hence Instagram has become our platform for research.

In July 2019 Instagram accounted for 10.2 million users in Ukraine, with 72% share of users younger than 35 years old (the time when MBAI research was performed)⁹. According to Plus One communication agency, the audience of Instagram in Ukraine has already reached 11 million users (50.7% growth in 2018), and it will approach the size of Facebook audience in Ukraine soon¹⁰. Consequently, in Ukraine Instagram grows at a higher pace than generally in the world, making it even more attractive for the business.

To understand Instagram as a communication instrument we should probably start from its core service which is visual storytelling built upon the basic elements — photos and videos shared by the users¹¹. Instagram was launched in October 2010 by Kevin Systrom and Mike Krieger and rapidly gained popularity by signing in 1million users within just two months, making it one of the most successful startups in the last decade. In 2012 Facebook acquired Instagram for 1 billion USD and integrated it fully into the overall Facebook business strategy.

The main idea that made the platform successful is 'keep it simple': one day the founders realized — all people want is to share photos of what they are doing right now and that's it. No complicated features. And it worked!

To get deeper understanding of the communication instrument we need to focus also on Instagram's business model built on three pillars (key partners getting payoffs from visual storytelling service):

- Users: build relationships;
- Businesses: advertise products;
- Influencers (power users, producing higher quality content): build a following that can be resold to businesses (to advertise their products).

Influencer (also called 'Internet celebrity — a person seeking personal fame and product sales)¹² is an element evolving along with the social networks, which is rather critical for this particular platform. Influencers are the most valuable producers of the user-generated content as they are engaging users to make actions and produce their own content not being directly paid for by Instagram. Instead, they are monetized from the businesses willing to promote their products through sponsored posts and marketing campaigns via influencers' accounts.

The profession of an influencer has become a digital dream job for many youngsters: do and post whatever people like, and you can easily become a millionaire! This (a bit naïve) idea contributes enormously into the great level of user engagement Instagram team can be proud of. So far Instagram has the highest engagement rate out of all the leading social networks — 2-7% of users interacting with each post¹³.

Summing up the strongest features of Instagram as a communication instrument we shall emphasize the fastest growth, the youngest audience, and the highest engagement among all the social networks, making it worth attention of any business.

To understand the Instagram audience and how to approach it, we need to go deeper into the discourse in the youngsters' 'virtual habitats' spinning around the most popular influencers. In particular, we have to understand what keeps people "stuck" to influencers, what makes them

⁹ <https://napoleoncat.com/stats/instagram-users-in-ukraine/2019/07>

¹⁰ https://plusone.com.ua/insta/en/instagram_in_ukraine.pdf

¹¹ <https://fourweekmba.com/instagram-business-model/>

¹² https://en.wikipedia.org/wiki/Internet_celebrity

¹³ <https://www.webstrategiesinc.com/blog/which-social-media-sites-get-the-most-engagement>

comment actively (even if this comment is just 1 out of 100,000 others with no chance to be noticed), and what makes them act. The ideal data solution could be to download Instagram posts for a definite period via API, select those most liked by Ukrainians, perform data cleaning and further apply various data analytics techniques to derive insights (it was the initial plan). After the Cambridge Analytica scandal Instagram terminated its old API and created the new one — Graph API making it harder (or close to impossible) to get the data needed. The revised solution is presented below.

2.2. The model description based on the MBAI Capstone

2.2.1. The list of 1000 most popular Instagram accounts

The information about the most popular posts and Instagrammers in Ukraine is impossible to obtain from publicly available raw data (Instagram API or other tools). Those lucky who can get it are AI-proficient software development companies with capacity to constantly gather data from different sources (on top of Instagram) and overlap it with the basic data from Instagram, and having a team of data scientists competent enough to process this data in real time with regularly updated algorithms.

In our case, the solution is to use the synthesized data by *HypeAuditor* — an AI-powered Instagram and YouTube analytics and discovery tool that helps to find relevant influencers and get insights about their audience¹⁴. This tool lets us be focused on the influencers most popular among Ukrainians, not just the influencers who registered Ukraine as their home country (soon we will see that those are absolutely different groups). Moreover, it declares to be the best fraud detection system (only real people are counted in the ratings) and to provide accurate user demographics.

Result: the list of 1 000 most popular Instagram accounts in Ukraine (including the total number of followers, the number of followers from Ukraine, and engagement rates) was downloaded for further data mining and analysis.

2.2.2. Exploratory data analysis

From the list of 1000 most popular Instagram accounts in Ukraine (Excel file drawn up from HypeAuditor data) 920 accounts were left for analysis after initial data cleaning. Several visualizations were performed to see the structure of data and potential trends (visualizations are attached in paragraph 7.4.)

Result: the scatter plots for general audience, audience in Ukraine, engagement rates and engagement in Ukraine were drawn up; donut charts for countries, languages and interests were produced. The insights will be presented in the next part of the project (2.4. Analysis of results).

2.2.3. Data mining

There are a number of Instagram data scraping tools publicly available online, but most of them ceased to work due to the latest changes in Instagram API. After a thorough analysis and testing, the *instagram-scraper* written and maintained by Richard Arcega proved to be the best and simplest working instrument¹⁵.

¹⁴ <https://hypeauditor.com/top-instagram-all-ukraine/?p=1>

¹⁵ <https://github.com/rarcega/instagram-scraper>

Result: 2 000 posts (2 posts x 1 000 influencers) with all the media, 2 260 758 comments and metadata were downloaded in json format and saved in a google drive. The period of posts publication on Instagram: 1-10 August, 2019.

2.2.4. Data preparation

The files containing all the information were processed in the following way:

- Json, Pandas, Numpy and Os modules were imported;
- Raw data was parsed, and clean data (anonymized) was drawn up into a data frame and saved as a csv file (DataFrame_full.csv);
- Comments languages (Russian, Ukrainian, English, None) were predicted using *whatthelang* Python library¹⁶ and the language column was added to the data frame (DataFrame_full_with_lang.csv);
- *None* field was attributed to 37% of comments containing usernames and emoji only (21%) and other languages (16%); taking into account the significant number of emoji posts, sentiment analysis of emoji may become a topic of the future research in this domain.

Result: clean data frame containing influencer's names, 2 influencer's posts, all the comments and the comments' language was saved in csv format (the total of 2 260 758 lines).

2.2.5. Model selection and training

Since most of the comments were made in Russian (53%), it was important to concentrate on the analysis of the models for sentiment analysis in Russian. The first model we tried was *Dostoevsky*¹⁷. The model was installed both in <https://colab.research.google.com> and locally. In both cases (due to mistakes in the installation process) the final prediction accuracy was about 0.52, which is insufficient for the good quality result.

The second option proved to be of better quality: the model trained on the predefined 8000 news in Russian was used providing for the accuracy score of 0.72¹⁸. This model is built by using the following Python libraries for NLP: Scikit-Learn, NLTK, Numpy, Pandas and Re.

Result: sentiment analysis performed for 1 186 114 Russian comments.

2.2.6. Prediction result validation

Having analyzed the interim result ('negative': 57438, 'neutral': 1039680, 'positive': 88996) we noted that too many positive and negative comments were shown as neutral. To make the result more accurate the minimum confidence score for defining the comment's neutrality was set at 0.45, in case it is lower — the next maximum confidence score was selected (either negative or positive).

Result: updated sentiment analysis performed for 1 186 114 Russian comments ('negative': 134418, 'neutral': 237562, 'positive': 814134) and saved as a csv file (Final_predictions.csv).

¹⁶ <https://github.com/indix/whatthelang>

¹⁷ <https://github.com/bureaucratic-labs/dostoevsky>

¹⁸ <https://www.kaggle.com/ziliwang/baseline-upsampling-balanced-softmax-regression/notebook>

2.2.7. Result visualization

To visualize the sentiment analysis results the *word_cloud* generator was installed¹⁹. After the initial test, it was evident that stop words should be included in the function.

Result: word clouds of the most used keywords were drawn for the positive, neutral and negative posts.

2.3. Analysis of the research results based on the MBAI Capstone

2.3.1. Exploratory data analysis — visualization results

The most important conclusion we can make from the scatter plot and basic calculations produced is the size of the total audience of 1000 most popular Instagram accounts in Ukraine — it gives us understanding about the level of influence the top accounts can potentially make:

- the average size of the total audience of an influencer popular among Ukrainians is about 1.5 million followers;
- the minimum size of the total audience has @eeeeliseevna — Russian actress and blogger with 61.2 thousand followers; and
- the maximum size of the total audience has @5.min.crafts — media/news company presenting mesmerizing ideas with 32.5 million followers;

Speaking of the global rating, only 2 accounts from the top Instagram Influencers in the world belong to the top Ukrainian rating as well, those are American singer @billieeilish and American actor @colesprouse. It gives us an initial hint on the fact that Ukrainian users are not involved in the global Instagram context.

More interesting insights come from the scatter plot and basic calculations of the Ukrainian share of the total audience — it gives us absolute numbers about Ukrainians following particular influencers:

- the average size of the Ukrainian audience of an influencer popular among Ukrainians is about 265 thousand followers;
- the minimum size of the Ukrainian audience has @aks — Australian photographer and fashion blogger with 23.1 thousand followers; and
- the maximum size of the Ukrainian audience has @zelenskiy_official — the former actor and the current President of Ukraine with 4.7 million followers;

It is worth mentioning that @zelenskiy_official comprises about 46% of the total Ukrainian segment of Instagram (4.7 million of total 10.2 million people), while on average the popular influencers can only enjoy about 2.6% of this segment — Ukrainian ones having naturally higher rates.

Another important indicator to analyze is an engagement rate — percentage of the audience, who likes or comments the posts (engages with the content):

- the values of engagement rates are negatively correlated with the size of the audience (correlation coefficient is minus 0.17), meaning — the greater the size of the audience, the fewer people are engaged with the content.

Here comes an important takeaway: as the audience grows, the personal connection and the feeling of the audience get diluted as a consequence of the larger number of followers.

¹⁹ https://github.com/amueller/word_cloud

- the average engagement rate of 1000 most popular Instagram accounts in Ukraine is 7.11% (which is a bit higher than the range 2-7% declared by Instagram itself);
- from the scatter plot we can see that the range of 7-20% is densely “populated” as well, meaning Ukrainians prefer to follow the most engaging influencers, not those with the largest audience only.
- the minimum engagement rate has @tnt_online — Russian media/news company with 0.11%; and
- the maximum engagement rate has @karrmbaby — a 16-year old Russian beauty/fashion blogger with 33.83%;
- in absolute numbers, the average number of likes/comments per post from Ukrainian audience amounts to 17 thousand interactions per post.

The numbers provided seem self-explanatory: the companies using Instagram as just another broadcasting tool will have big audiences (due to wide TV presence mostly), but they will never have high engagement, as opposed to niche bloggers.

Finally, we are getting probably to the most fundamental indicators that define the basic interests of Ukrainian audience and which context it belongs to.

Let's look at the geography of the influencers popular among Ukrainians in the donut charts: 53% come from Russia, 40% — from Ukraine, 7% — from other countries. On top of that, 82% of influencers are posting their content in Russian, 13% — in Ukrainian, and 5% - in English.

The data driven conclusion is pretty straight-forward: Ukrainian Instagram audience is mostly consuming Russian content and the content in Russian language. It is also worth noting that most of the influencers of Ukrainian origin use Russian in communication with their audiences.

To understand who these influencers are in terms of self-identification (or ‘occupation’ if it is an appropriate word in this case) we should analyze the donut charts of their topics of interests:

- the majority of the influencers belong to the spheres of Fashion/Beauty/Modeling (29%), Music/Dance/Entertainment (19%), Video-bloggers (9%) and Actors/TV hosts (8%);
- 25% of influencers are not identified with any specific sphere.

These numbers confirm that the world of celebrities, beauty and entertainment is more attractive while at a young age.

2.3.2. Sentiment analysis — results

While EDA provided us with some characteristics of influencers and their audiences lying on the tip of the iceberg, sentiment analysis is meant to go deeper and shed the light on the emotions prevailing in discussions, as well as provide the generalized content analysis of the users comments.

The most important conclusion we obtained from the sentiment analysis of the Russian comments is the general tone of 1000 most popular Instagram accounts in Ukraine — it is overwhelmingly positive:

- the negative comments under the posts of the influencers popular in Ukraine comprise 11.3% of the total comments (134 418 out of 1 186 114 Russian comments);
- the neutral comments under the posts of the influencers popular in Ukraine comprise 20% of the total comments (237 562 out of 1 186 114 Russian comments); and

- the positive comments under the posts of the influencers popular in Ukraine comprise 68.7% of the total comments (814 134 out of 1 186 114 Russian comments).

Selective assessment of results shows that many neutral comments may be perceived as rather positive, and negative comments — as neutral, thus adding arguments to the overall positive tone of Instagram in Ukraine.

Content analysis of the negative, neutral and positive word clouds shows some similar trends (see the visualizations attached in paragraph 7.4):

- text contains a lot of emotional words (some comments contain emoji only);
- comments are full of spam messages offering the service — ‘how to earn money on Instagram’;
- no specific words related to important events in Ukraine (like elections) were noted in the word clouds;
- some influencers appear in both top lists — the most positively commented influencers and the most negatively commented ones.

2.4. Recommendations based on the MBAI Capstone

2.4.1. Engage, not inform

This research showed that while communicating with the audience the verb ‘inform’ should be replaced with ‘engage’ and/or ‘interact’. It is not just the wording that counts, it points out to the cardinal change to be made approaching the youngsters: they do not want to be notified about something happening around, they want to be engaged in potentially interesting interactions no matter how serious topics and messages are.

Recommendation: in building communication with the young audience the content produced shall be to the maximum extent interactive, not informative.

2.4.2. Persona: an influencer, not an institution

The most successful accounts in Instagram providing the best engaging content belong to persons (‘influencers’), not institutions (or businesses). Many institutions use Instagram account as a broadcasting tool, not a 2.0 communication instrument. While communicating with the followers it is important to build a strong connection meaning the full engagement by an influencer him/herself.

Recommendation: public figures/entrepreneurs/politicians must become digital influencers by building personalized highly interactive ‘niche’ Instagram accounts.

2.4.3. Bring the value

When planning to build an influencer’s account from scratch it may be useful to apply a startup methodology. The core principle here is to offer your followers ‘a pain-killer, not a vitamin’²⁰. It is important to have a critical look at an influencer-to-be persona from the perspective of his/her audience: is he/she bringing the value – something that the youngsters really need today – with the content proposed? The metrics here is the engagement rate: growing in the first months and stable (definitely not falling) along with the audience increasing.

²⁰ <https://www.forbes.com/sites/georgedeerb/2014/07/24/is-your-startup-building-a-vitamin-or-a-painkiller/#27e787b83826>

Recommendation: a potential influencer must do something youngsters want (a bit re-shaped motto of Y Combinator by Paul Graham: ‘Make something people want’²¹) thus bringing the maximum value for the audience.

2.4.4. Live like a youngster

Any marketing professional will recommend putting oneself into the audience’s shoes, which is getting even more important in the digital world. Instagram implies a real time (fast) communication where one can not pretend all the time unless he/she is not aimed at capitalizing on the audience.

Recommendation: a potential influencer shall genuinely become a part of the crowd he/she is trying to reach:

- look the way youngsters like;
- speak the way they do;
- get truly interested in their topics of passion/concern;
- love and do what they love doing;
- don’t be afraid to use humor on the edge — serious issues don’t have to be boring, etc.

An alternative (minimum) solution — an influencer-to-be may try to involve existing influencers into the joint activities, thus building awareness and trust with their audiences, which can gradually become his/her following as well. An ideal (maximum) solution is to combine both.

2.4.5. Get youngsters on board

As already suggested, ‘Lean Startup’ techniques by Eric Ries may be also applied in building a following from scratch²². ‘Fail fast’ as a core principle providing for the fast learning and iterating can be very helpful in case an influencer-to-be has a support group and communication strategy co-creators representing the target audience (youngsters). In a dynamic world, we often do not have time for classic business steps: develop a profound business plan, perform detailed market research, conduct extensive sociology, etc. When one has to launch his/her project fast (this is reality in most cases), all he/she can do is to make the best estimation from experience and information available and then — experiment. Same with society related issues: we often have to start immediately and learn from our failures.

Recommendation: a potential influencer must get youngsters into his/her team, who will assist in shaping his/her communication strategy and be the first test group to evaluate if the content ‘flies off’.

2.4.6. Promote Ukrainian context

The most frightening thing with Ukrainian Instagram audience is its extensive influence by RuNet (53% of influencers are from Russia, 82% of content consumed — in Russian), which is not good considering aggression and potential exposure to Russian propaganda. The math here is rather simple: the more Ukrainian influencers with competitive content will appear, the less Russian content will be consumed. Research shows that Russian language is not a principal

²¹ <https://hackernoon.com/quantifying-ycombinator-make-something-people-want-2d07b7762f56>

²² <http://theleanstartup.com/principles>

element driving success for the blogger in Ukraine, but the content he/she produces. For example, good quality videos in Ukrainian (good — in terms of audience engagement) get popular in Russia, despite the language²³.

Recommendation: a potential influencer shall partner other Ukrainian influencers to promote each other and Ukrainian Instagram context as well.

2.4.7. Be emotional (better positive)

The sentiment analysis showed that Ukrainian Instagrammers are searching for a “positive shelter” to switch from the daily routine. This is a social network, where about 89% of the comments in Russian under the posts of influencers popular among Ukrainians are positive or neutral. Users do not talk about serious things, rarely get into scandals, usually comment with short emotional phrases. It does not mean serious messages should not be conveyed via Instagram, but they had better be formulated in a positive (easy) and engaging way. Moreover, some influencers appear in both lists of the most negatively and positively commented posts. This leads us to a conclusion that these top-commented influencers are the most emotional ones, attracting large numbers of negative and positive (emotional) followers.

It is also worth mentioning that Instagram is getting more commercialized, proved by a huge number of spam comments offering Instagram marketing services. It is an indicator of high growth potential of this social network, along with the fact that more and more people are getting heavily stressed in a daily routine, and they need a ‘safe heaven’ (in our case — parallel digital reality) as an anti-stress measure.

Recommendation: to build a solid following, a potential influencer shall produce positive emotional content, even though he/she may be promoting serious things.

The recommendations listed let us think about the creation of the digital instrument in the Martech field to meet the needs of an influencer-to-be in building a solid following.

At the moment, social networks are not only for people to keep in touch with each other. For common people and public figures it is also a powerful instrument to deliver targeted messages to their audience and a channel of making additional income (both by selling through social networks and by advertising third-party brands on someone’s account after reaching a certain number of active followers). For businesses this is an important channel of forming an image of a brand and communicating with current and potential audiences. It makes social networks tools a very interesting focus for Martech startups which grow at 67% for the past three years in the UK and the US only.

²³ <https://www.youtube.com/watch?v=1bhL8dUQVIM&feature=youtu.be>

Section 3: MARKET ANALYSIS

There are 160 Martech startups in Ukraine and 7,040 — worldwide. Martech industry in the UK and US only was USD 96 bn in 2019 and it was growing at the rate of 67% YoY.

The most popular social networks in Ukraine (Instagram and Facebook) were growing at the rate of 194% YoY and 50% YoY correspondingly. Total number of Ukrainians on Instagram in 2019 was 11.2 mln persons and on Facebook — 18.7 mln persons.

Current market players in Martech related to social networks tools develop instruments with the focus on either social listening, or content management, or reporting & analytics. In the vast majority of cases they tend to combine several key features.

Interest of the Martech industry to Social Media marketing is explained by the increasing influence of Social Media on purchasing decisions of Gen Z and Millennials: 88% of people learn about products they're interested in buying in Social Media. Influencer Marketing started taking a substantial part in marketing budgets. 56% of marketers from the US and UK prefer micro-bloggers (with <500 followers) to Top stars, so any person can become an influencer and make money with their Instagram account.

There is a big variety of different solutions aiming to solve different problems with SMM. However, there is no product with the exact functionality as InstaTop. Top alternative tools worldwide are: socialbakers.com, sproutsocial.com, hootsuite.com, tailwindapp.com, agorapulse.com. In Russian speaking countries it is popsters.ru. Comparison of features shows that InstaTop's main competitor worldwide is socialbakers.com, however among tools which analyze Russian language well is popsters.ru.

Top 4 trends among competitive Martech tools are: being 'all-in-one' tools by providing as many functions as possible, serving as many social networks as possible; allowing integration with other tools; providing custom solutions and browser plugins.

Main innovations in the industry are driven by technological, social and legal factors. Technological excellence and availability of powerful tech resources boosted AI development - more and more new marketing technologies are either already AI-powered, or working on integrating AI algorithms into their solutions with the goal to stay competitive. Another important technological factor is Internet penetration: there were 4,479 mln active internet users in the world in 2019. Among them 83% (3,725 mln) are social media users. Social factors (mainly, trends of population declining and aging) force more automation instruments to be developed to substitute labor power by machines. Legal factors hold AI-driven innovations back - many questions are not answered yet from a legal and ethics standpoint.

Due to the COVID-19 pandemic outbreak at the time of this capstone project preparation, some changes in the factors influencing the Martech industry are expected. Main changes are happening in Economic and Technological factors caused by the start of global recession and increase of e-commerce due to strict quarantine measures taken by most governments forcing offline businesses to go online.

3.1. Market overview

Influencer Marketing

Digital Marketing budgets today cannot be imagined without Social Media channels. And if in the past marketing plans would include costs mostly on advertising, now marketers should include costs on Influencer Marketing. Current trends derived from Econsultancy survey²⁴ show that more and more marketers prefer micro-influencers to top-tier influencers (56% of US and UK marketers) as they are more cost-effective. It means that any person with 500+ followers can start making revenue (from 100 USD per post) by promoting products (according to the research run by Klear²⁵).

Influencer Rates* Worldwide, by Social Media Platform and Influencer Tier, March 2019				
	Nano (500-5K followers)	Micro (5K-30K followers)	Power (30K-500K followers)	Celebrity (500K+ followers)
Instagram				
—Post	\$100	\$172	\$507	\$2,085
—Video	\$114	\$219	\$775	\$3,138
—Story	\$43	\$73	\$210	\$721
YouTube video	\$315	\$908	\$782	\$3,857
Facebook post	\$31	\$318	\$243	\$2,400
<small>Note: n=2,500; *represents rate that influencers charge brands Source: Klear, "The Klear Influencer Marketing Rate Card," May 13, 2019</small>				

Source: <https://www.emarketer.com/content/how-much-are-brands-paying-influencers>

Research by Morning Consult "The Influencer Report: Engaging Gen Z and Millennials"²⁶ showed that Social media became a crucial driver of consumer decisions for younger generations: 88% of Gen Z and Millennials learn about products they are interested in buying in Social media. 56% have purchased a product after seeing a post from someone they follow. No wonder, that 86% are willing to post sponsored content for money and 54% would become an influencer, given the opportunity.

Martech

For the past 3 years the number of Martech startups has been growing in Ukraine at the rate of 24% year over year, and in the world — at the rate of 40% [Chart "Technological factors in Section 7.2"]. In 2019 in Ukraine alone there were 160 companies offering marketing or advertising technology products.

Social Networks

The quantity of Instagram users in Ukraine has increased from 3.8 to 11.2 mln users (194% YoY). The quantity of Instagram users worldwide has reached 1.1 bn people (18% YoY growth over the past 3 years) [Chart "Technological factors in Section 7.2"] The situation with Facebook is also positive — there were 19 mln Ukrainians on Facebook in 2019, year over year growth was 50% for the past 3 years. Total number of Facebook users was about 2.5 bn people worldwide in 2019.

²⁴ <https://www.emarketer.com/content/how-much-are-brands-paying-influencers>

²⁵ <https://klear.com/blog/influencer-pricing-2019>

²⁶ <https://morningconsult.com/influencer-report-engaging-gen-z-and-millennials/>

Key Insights

- Martech is attractive for investors in Ukraine — the number of startups in marketing and advertising technologies increased from 129 in 2017 to 160 in 2019.
- The size of the Martech industry worldwide is huge and is growing. Only in the US and UK there was USD 96 bn in 2019 and it has increased at the rate of 179% YoY over the past three years.
- Social networks' audience is growing both worldwide and in Ukraine in particular.
- Influencer Marketing is becoming an important marketing channel.
- 56% of US and UK marketers prefer smaller influencers to TOP-stars.
- 54% of Social media users would become an influencer, given the opportunity.

Overview of the competitors

Main segments of Social Media analytics tools are:

- 1) Social listening tools — instruments to monitor mentions of hashtags or keywords in social media. Mainly for companies;
- 2) Content management tools - instruments to schedule and manage posts;
- 3) Reporting tools — instruments to analyze your account performance and generate automatic reports;
- 4) Analytics tools — instrument to collect the data from social media and give meaningful insights.

Most competitors combine several features, but are mostly focusing on a single one. Competitors tend to increase the number of Social Networks they monitor/analyze, thus there is no instrument which would specialize in one social network only (the smallest number of monitored social networks has tailwindapp.com, it monitors Instagram and Pinterest only).

There is no product with exactly the same functionality as InstaTop suggests. Among the top alternative tools worldwide are: socialbakers.com, sproutsocial.com, hootsuite.com, tailwindapp.com, agorapulse.com. In Russian speaking countries the closest alternative is popsters.ru.

The top three growing competitors are sproutsocial.com, hootsuite.com, tailwindapp.com. [Socialbakers.com](https://socialbakers.com) and agorapulse.com show a small decline in traffic over the past three years (-10% and -2% correspondingly).

Comparison of products' features can be found in the table below:

Company	AI-powered	Content analysis	Reports	Content plan	Content management
InstaTop	yes	yes	yes	yes	yes
Socialbakers.com	yes	yes	yes	yes	yes
sproutsocial.com	no	no	yes	no	yes

hootsuite.com	no	yes	yes	no	yes
tailwindapp.com	no	no/yes	yes	no	yes
agorapulse.com	no	no	yes	no	yes
popsters.ru	no	yes	yes	no	no

The main competitor is Socialbakers as it is the only one using AI in its analysis among others.

3.2. Overview of best practice approaches in the market/segment

The common trends among competitors are as follows:

1) "All-in-one" tool

Most social media analytics tools are focusing on just one service, however tend to increase the number of features to be a "one-in-one" tool. For example, sproutsocial.com combines social listening and content management functionality along with analytics & reporting instruments; tailwindapp.com deals with just two social networks, but provides content management, analytics and reporting tools as well as content suggestions for content plans.

2) Cover as many social networks as possible

Only tailwindapp.com has just two social networks to monitor (Instagram, Pinterest), while the rest tend to cover as many as their technology allows. For example, Popsters cover 12 social networks. This tendency can be explained by the fact that most companies and people have 2+ social networks.

3) Integration with other tools

Main players in the Social analytics tools industry tend to provide opportunities for integrations with other tools and/or services (e.g., API). This is mainly important for companies. Current trend of omnichannel marketing forces companies to look for technological solutions which would allow them to integrate with existing tools (especially BI). For example, sproutsocial has integrations with 7 social networks and 6 other tools including Google Analytics. Alternatives to ready integrations are API or custom solutions.

4) Browser plugins

Popster, tailwindapp also provide browser plugins for quick access to the most important functionality.

5) Custom solutions

Tools which are mainly in B2B business (e.g., Hootsuite, socialbakers) also provide custom solutions for enterprises.

3.3. Overview of trends (technological, innovation, etc)

Martech technological development is influenced by many factors, but the major three of them drive most of the innovations in the industry for the past years. Looking at PESTLE analysis (Political, Economic, Social, Technological, Legal and Environmental factors), Martech innovations are greatly driven by technological, legal and social factors.

1. Technological: Internet Penetration

As statista reports²⁷, there were 4 479 mln active internet users in the world in 2019. Among them 83% (3 725 mln) are social media users which is important for InstaTop products [chart Global digital population as of January 2020 (in billions) in Section 7.3.1].

Internet penetration forced both businesses (e-commerce) and marketing to go digital. New digital marketing channels appeared and technologies keep on penetrating into marketing. Digital marketing channels allow a way more opportunities of automatization and measurement compared to offline marketing.

2. Technological: AI

Technological progress has brought to the world quite affordable and powerful computers. Access to such machines has boosted artificial intelligence development a big time and it's just the beginning. Martech products have been integrating AI in various niches²⁸ including but not limited to:

- Content Curation And Generation;
- AI-Enhanced Digital Advertising;
- Chatbots;
- Behavior Analysis And Predictive Analytics.

AI has become an important factor of growth hacking²⁹ strategies for marketers.

3. Legal

There are Legal and Ethics³⁰ factors which hold AI-driven innovations back - too many issues are not solved yet to make AI-driven innovations available to a wide audience.

4. Social: changes in the population & demographics

There are two main trends in the population changes which affect changes in marketing technologies industry:

a) The population is growing at a slower rate³¹;

Between 1950 and 2018, average annual population growth was 1.6%. Yet, right now it is 1%. It will decline gradually over the course of this century, and by 2100 it will be almost zero. The population of the earth will stabilize at around 11 billion.

b) The population is getting older³²;

The share of the population over age 65 will rise from 5% in 1950 to 15% in 2050 to a quarter of the planet's population by 2100. The year 2018 marked an epochal demographic turning point: Earth became home to more people aged 65 years and over than children under five for the first time ever. Labor productivity is one of the major factors of economic growth. With declining and aging population trends, the solution would be to invest into technologies to both automate human processes and make them more efficient. Thus, **automation** is gaining momentum a bit of time. Automation is happening in many industries and marketing is not an exception.

²⁷ <https://www.statista.com/statistics/617136/digital-population-worldwide/>

²⁸ <https://www.forbes.com/sites/forbesagencycouncil/2019/08/21/how-artificial-intelligence-is-transforming-digital-marketing/#6777df2221e1>

²⁹ <https://kintmarketing.com/marketing-article/50-ai-growth-hacking-tools/>

³⁰ <https://abovethelaw.com/law2020/the-ethical-implications-of-artificial-intelligence/>

³¹ <https://www.bbvaopenmind.com/en/economy/global-economy/changing-global-demographics-the-certain-future/>

³² <https://www.bbvaopenmind.com/en/economy/global-economy/changing-global-demographics-the-certain-future/>

Few examples³³ of marketing automation cases are:

- Welcome programs (onboard registrations);
- Repurchase programs (retention) ;
- Reminder programs;
- Multichannel programs (omnichannel marketing);
- A/B testing;
- Retargeting programs (e.g, social ads);
- And one of the most important — automatization of measurement which allows receiving fast insights about marketing activities.

5. Disclaimer due to COVID-19

During the work on this capstone project the pandemic of COVID-19 has been announced. Although the pandemic has just started and its consequences are not fully obvious and can only be predicted, it is expected to have a huge effect on all the PESTLE factors. In terms of Martech the most important changes are expected in Economic and Technological areas:

- **Economic**

The global economy is considered³⁴ to already be in recession. J.P. Morgan's forecast shows that a two-quarter GDP contraction is expected in both the U.S. (-10% and -25%) and the Euro Area (-15% and -22%). This will lead to the increase of unemployment rate worldwide. Unemployment rate has already started increasing due to strict quarantine measures taken by most countries including Ukraine. According to an updated forecast³⁵, the level of unemployment in Ukraine will increase to 9.4% vs predicted earlier 8.1% (however, this number can be even worse); inflation rate will speed up to 8.7% vs predicted earlier 5.5%. From one side, increase of unemployment will cause decrease of income, from the other - some governments already consider³⁶ leveraging the power of information and communication technologies for social good and trying to decrease the unemployment rate among youth through these technologies. Which means that the number of people who are potentially interested in SMM tools can increase. The highest risk for InstaTop seems to be related to the potential cuts of marketing budgets in 2020 due to the pandemic.³⁷ The threat is strong, but it is not relevant for the company during the first 2 years of operations. The B2C product will be InstaTop's initial focus, which has no direct relationship to the decreasing marketing budgets of corporations. The indirect influence may be quite the contrary - the companies will stop spending huge amounts on TV advertisement and switch to more targeted digital instruments, including cooperation with influencers. Such an approach may prove to be much more effective given the limited budget. Thus, the niche of Instagram influencers - potential consumers of InstaTop B2C product - may become denser providing the company with more space for business development. According to various forecasts the economic recovery fully depends on success in fighting COVID-19, namely creation and mass production of the vaccine³⁸. There are some mentions by the IMF representatives that the recovery is possible in 2022, while in 2021

³³ <https://www.emarsys.com/resources/blog/11-best-examples-of-b2c-marketing-automation/>

³⁴ <https://www.jpmorgan.com/global/research/fallout-from-covid19>

³⁵ <https://prm.ua/ru/skolko-budet-stoit-dollar-kabmin-obnovil-makroprognoz-na-2020-god-iz-za-koronavirusa/>

³⁶ <https://www.rhsmith.umd.edu/smithresearch/research/how-social-networks-can-curb-youth-unemployment>

³⁷ <https://nypost.com/2020/03/17/advertising-budgets-could-take-a-3b-hit-over-coronavirus/>

³⁸ <https://edition.cnn.com/2020/04/02/economy/recession-how-long-will-it-be/index.html>

a lot of measures will be taken to accelerate it³⁹. Year 2022 of economic recovery as a base scenario perfectly fits the company's plan to extensively launch its B2B product after 2 years of B2C operations. The companies who would feel the benefits of digital instruments during the recession are likely to raise the digital marketing budgets when recovery starts.

- **Technological**

Strict quarantine measures announced by the governments also forced many companies to move online or accept technologies they didn't consider before. We expect an increase in the e-commerce sector and an increase in demand for marketing services for this sector (including SMM).

3.4. Overview of alternative uses of company's product/service on the market

The technology able to scrap social networks and analyze content can also be used for alternative purposes.

- 1) **Research agencies**

The technology allows analyzing content of chosen accounts and thus check and predict trends in specific niches by certain keywords.

- 2) **Custom research for public figures (politicians, singers etc)**

Using the combination of powerful technology and expert competence in social media marketing, the tool may be able to create profiles of the competitors to analyze their strengths and weaknesses.

³⁹ <https://www.imf.org/en/News/Articles/2020/03/27/pr20114-joint-statement-by-the-chair-of-imfc-and-the-managing-director-of-the-imf>

Section 4. SALES AND MARKETING

InstaTop will present two versions of the product — Base and Premium. The release of both versions is scheduled after 6 months of development.

Two main target segments for the Base product are: Generation Z Non-specific Topic Instagram Users and Specific Topic Bloggers. Positioning statement for Base product is as follows: "to active Instagram users, InstaTop is a brand in the category of Instagram analytics tools, which suggests winning content plans to become a TOP blogger in Instagram, because it offers insights based on AI algorithms and offers only solutions which worked for others".

Two target segments for the Premium product are Base product users plus B2B segment (micro-companies, Private Entrepreneurs from classes F,G,H,I, L, P,R,S. Positioning statement for B2B segments is as follows: "to private entrepreneurs, InstaTop is a brand in the category of Instagram analytics tools, which suggests winning content plans to become a TOP account in Instagram, because it provides insights based on AI algorithms and offers solutions which have worked for others."

Marketing mix for InstaTop contains Product, Place, Price and Promotion parts.

Product is represented by two versions: Base and Premium. Base version delivers a number of content plans tailored for specific topics. The solution uses AI algorithms to analyze activity and content of the top performing bloggers in specific categories and offers mobile apps (iOS, Android). Premium version offers additionally Marketing strategy prepared and verified by top SMM gurus. The products are GDPR compliant, all the data is fully anonymized.

Place for product distribution in year 1 is Ukraine, year 2 - + 1 CIS country, year 3 - USA and UK. InstaTop is a digital product so distribution channels are limited to the website and official app stores (App Store and Google Play).

Price is defined using a combination of going rate pricing & odd number pricing strategies. The analysis of SMM analytics tools pricing brought us to 10 USD (+/-2 USD) price for Base product and 96 USD (+/- 2 USD) for Premium product. A series of A/B tests should be run to define the price with the highest conversion rate.

Promotion mix consists of Advertising, Sales promotion, Personal selling and Public Relations.

Marketing objective for year 1 is to become a leading provider of AI-powered SMM solutions in Ukraine and 1 more CIS country by the end of 2020 with 0.5% share of paying customers from the total number of the target audience for the Base product and 0.01% share by the end of 2020 for Premium product.

4.1. Overview of products' formats and segmentation

We offer two products — Base and Premium. Base product is targeted at Generation Z Non-specific and Specific bloggers Instagram users. With the Premium product we target the same

audience and additionally B2B segment (Micro-companies, Private Entrepreneurships of classes F,G,H,I, L, P,R,S where we believe impact of online presence will be the biggest).

Segments and positioning for Base product

Segments	Sub-groups		
Segment I - Generation Z	Non-specific Topic Instagram Users	Specific Topic Bloggers	Users of Facebook/LinkedIn, but still non-users of Instagram (potential audience)
	(36.7% of Ukrainian Instagrammers, 4.1 mln)		
Segment II - Generation Y (35.3% of Ukrainian Instagrammers, 3.95 mln)			
Segment III - Generation X (17.3% of Ukrainian Instagrammers, 1,9 mln)			

Target segments

Among the segments indicated, the most promising for the business model of InstaTop is Gen Z (Segment I, Subgroups 1 and 2). Total number of Gen Z users among Ukrainian instagrammers is 36.7% (or 4,1 mln users as of 2019).

Generation Z

- first fully digital generation — digital natives, who start using digital devices even before they start talking;
- very engaging generation (the main difference from Gen Y and Gen X), ready to interact and share ideas;
- influenced by social media celebrities to a great extent and willing to imitate their lifestyles.

Specific Topic Bloggers

- Instagram users who are particularly interested in a specific topic (usually their hobby) to the extent of being able to produce an inspiring content on a daily (sometimes hourly) basis;
- most Instagram thematic bloggers have in mind monetization of their accounts, and some of them successfully do it;
- the content produced by the bloggers is very much personalized, most of the stories are inspired by their private lives which resonate well with the audience;
- Instagram bloggers tend to cooperate with each other, their performing cross-promotion among their audiences.

Rationale

- active Instagram users striving to become influencers (both segments addressed) lack systematic approach: while there are a lot of trainings on building a solid following and other content, it is all mostly about general instruments and approaches;
- moreover, young Instagram users cannot afford expensive services offering tailored account promo strategies;

- it is obvious that a disruptive solution should be created to tackle both “pains”: tailored solutions for a moderate fee.

Positioning Statement

To active Instagram users, InstaTop is a brand in the category of Instagram analytics tools, which suggests winning content plans to become a TOP blogger in Instagram, because it provides insights based on AI algorithms and offers solutions which have worked for others.

Segments and positioning for Premium product

In addition to the Segments for Base product, our Premium product is also interesting for small businesses in Ukraine, Private Entrepreneurs from specific sectors, where online presence will have the biggest impact. According to the research by www.oecd.org⁴⁰ from 2017, 96% of companies in Ukraine are micro-companies with less than 10 employees and 83% of all companies are Private Entrepreneurs. The number of companies in each class is based on <http://www.ukrstat.gov.ua/> report.

Our target classes are:

- Construction (F)
- Wholesale and retail trade; repair of motor vehicles and motorcycles (G)
- Transportation, warehousing, postal and courier activities (H)
- Temporary Placement and Catering (I)
- Operations with real estate (L)
- Education (P)
- Arts, Sports, Entertainment & Recreation (R)
- Provision of other services (S)

We expect the biggest impact on business from online presence from these sectors.

Segments	Sub-groups		
Segment I - Legal entities (according to the classifier of economic activities) (599161 companies)	Online presence can have major impact the business (F,G,H,I, L, P,R,S) (404217 companies)		Online presence can have little impact on business (J, K, M, N, O, Q) (192295 companies)
	Micro-companies (96 %) (388048)		Macro-companies (4%, or 16169 companies)
	PE (83 %, or 322080 companies)	Non-PE(17%, or 68968 companies)	

⁴⁰ Compilation of entrepreneurship statistics in Ukraine: 2018 by OECF

Segment II - Industrial companies and Agriculture, Forestry and Fisheries (100140 companies)	Industry (B, C, D, E) (48603)	Agriculture, Forestry and Fisheries (A) (51537 companies)
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Target audience

With the Premium product InstaTop will also reach out to companies through their owners.

- Male/Female;
- 24-45 y.o.;
- business owners of micro-companies
- tech-savvy, interested in new technologies and trends.
- develops own personal brand as a professional;
- Life style:
 - Prefers restaurants with non-traditional food;
 - Often travels around Ukraine and abroad for inspiration;
 - Chooses countries where he/she can check best practices for their business;
 - Either has or thinks of having online presence for their business;
- Vals framework: innovators, thinkers and experiencers.

Rationale

- With increasing impact of social media on purchasing decisions of consumers, businesses must keep up with the trend to stay successful;
- InstaTop has strong potential strengths in serving the segment and the market segment attractiveness is high (Attractive).

Positioning Statement

To private entrepreneurs, InstaTop is a brand in the category of Instagram analytics and content creation tools, which creates a winning Instagram content strategy in just one day, because it uses AI-based algorithms to collect and analyze the content of top Instagram accounts in your business niche to generate insights based on what has worked for others.

4.2. Description of marketing mix

Product

Base (B2C)	Premium (B2C+B2B)
InstaTop offers a number of winning Instagram content plans tailored for selected topics;	InstaTop delivers the winning Instagram marketing strategy in just one day;
Delivered in the form of a mobile application, InstaTop virtual assistant shall contain a particular schedule of actions,	Delivered in the form of a PDF presentation

instructions for better performance, a system of notifications and a tracker of results;	
Content plans comprise the sequences of actions performed by famous influencers in a selected thematic category and defined as successful in terms of building a following (including not obvious details);	Strategies are initially verified by top professionals in SMM with proven results:
The price of monthly subscription is affordable for most users (less than a T-shirt), especially for those aiming to monetize their accounts;	The price of monthly packages is 1/10th of the average salary of 1 SMM specialist;
The product is fully compliant with GDPR, all the data used by AI algorithms are anonymized;	
With the technology offered the team of data scientists will analyze content of the influencers who are popular in particular categories, provide insights on creating engaging media products (stories, photos, video) and present this information to highly skilled SMM strategists;	
SMM strategists will include the AI based insights into winning marketing strategies and content plans providing for the real results in increasing the audience engagement and building a solid following.	

Place

	Base (B2C)	Premium (B2B)
Target location	Ukraine, +1 CIS country; US and UK	Ukraine
Trade channels	The strategy includes only digital distribution (as this is a software): website and official app stores (App Store and Google Play). Potentially, alternative app market places.	

Price

Price strategy: combination of going rate pricing & odd number pricing.

SMM analytics software pricing ranges can be broken down into three groups: 1) 7-50 USD; 2) 87-\$99 and 3) \$200+ for monthly subscriptions. The Base package pricing lies in the 1st group (<50 USD), its monthly package costs 21 USD (+/-2 USD). The Premium package lies in the 2nd group (<100 USD), its monthly package costs 96 USD (+/- 2 USD). A series of A/B tests should be run to define the price with the highest conversion rate.

InstaTop will also introduce a fee of 50 USD for additional customizations (e.g., custom reports, custom number of analyzed channels).

Promotion

Advertising	Sales promotion	Personal selling (B2B)	Public Relations
Brand Awareness	Increase of average check	Sales	Reputation management
Digital <ul style="list-style-type: none"> Media buying (e.g., Admixer) Placement in business and marketing magazines Branding on targeted business and marketing resources Facebook ads (Facebook & Instagram placement) Google ads Paid posts in professional Telegram groups Offline: <ul style="list-style-type: none"> Educational conferences and workshops Educational events <ul style="list-style-type: none"> Offline workshops Online webinars Influencer marketing <ul style="list-style-type: none"> Posts by influencers 	<ul style="list-style-type: none"> Limited time promo(B2B only): Discounts for bulk purchases (every second package is -10% off): 1st package - 100 USD; 2nd package - 90 USD (-10% off); 3rd package - 81 USD (-10% off) Permanent promo: Discounts for long-term purchases 	<ul style="list-style-type: none"> Outreach through LinkedIn and professional Facebook groups Getting leads from offline marketing conferences Creating database of the agencies by scraping the web and approach them directly 	<ul style="list-style-type: none"> Placements of PR and Native ads in digital business and marketing magazines and trusted resources Placement in digital software marketplaces like ProductHunt with real reviews of users

Value-Based Brand Connection Map (communications strategy):

	Base	Premium
Brand Essence	AI-powered tools for winning SMM strategy	
Creative Idea	Be InstaTop	B2B: Business that can't be found online, doesn't exist
Platform	1) Advertising campaigns: SMM tool, that works 2) Direct Sales: Focus on business, InstaTop will take care of social media channel.	
Contact points	Telegram channels; online ads (Facebook & Instagram, Google), Educational events (workshops, webinars), Influencer Marketing	
		Professional magazines, events, direct outreach
Visual Brand identity	Pink & Yellow colors & Logo as per brandbook	

Consumer Portrait	Male/Female, 18-24 y.o, active Instagram users with 100+ subscribers and minimum 1 post per day; active lifestyle, prefers non-standard vacations in unique locations, visits most popular restaurants in the area minimum 3 times a week, visits exhibitions and top events, follows popular insta bloggers, either doesn't work or makes money with blogging, influenced by social media celebrities, has a hobby and wants to monetize it through Instagram	B2B: Male/Female, 24-45 y.o., business owners of micro-companies, tech-savvy, interested in new technologies and trends. Likes non-traditional restaurants. Often travels around Ukraine and abroad for inspiration. Chooses countries where he/she can check best practices for their business. Either has or thinks of having online presence for their business.
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4.3. Overview of sales channels

InstaTop is a digital product and it will be distributed through digital channels: website and official app stores (App Store for iOS phones and Google Play for Android phones). Alternative app market places shall be added at the later stages of product promotion. More details about sales channels are described in the Promotion part of the Marketing mix (paragraph 4.2.)

4.4. Resume of strategic positioning

Marketing objectives

Goal (year 1): become a leading provider of AI-powered SMM solutions in CIS countries by the end of 2020 with 0.5% share of paying customers from the total number of the Market for the Base product, convert 0.1% of Base product users into Premium users and convert 0.1% of B2B segment into Premium product users.

	Base package	Premium package
Year 1	<ul style="list-style-type: none"> Sell 44880 Base packages of the total value of USD 470 850 USD by the end of 2020 in Ukraine 	<ul style="list-style-type: none"> Sell 1120 Premium packages of the total value of USD 1120919 USD by the end of 2020 in Ukraine
Year 2	<ul style="list-style-type: none"> Sell 56,481 Base packages of the total value of USD 622,084 by the end of 2021 Sell 91,985 Base packages of the total value of USD 1,013,123 in +1 CIS country 	<ul style="list-style-type: none"> Sell 1,175 Premium packages of total value of USD 124,332 th and charge 335 Customisation fees of the total value 16,755 by the end of 2021 in Ukraine
Year 3	<ul style="list-style-type: none"> Ukraine: sell 68,075 Base packages of the total value of USD 787,263 +1CIS country: sell 103,780 Base packages of the total value of USD 1,200,187 USA: sell 91,849 Base packages of the total 	<ul style="list-style-type: none"> Sell 1,230 Premium packages of total value of USD 136,649 and charge 342 Customisation fees of the total value 17,090 by the end

	value of USD 3,186,602 • UK: sell 20,866 Base packages of the total value of USD 723,912	of 2022 in Ukraine
Year 4	• Ukraine: sell 79,668 Base packages of the total value of USD 967,406 • +1CIS country: sell 115,576 Base packages of the total value of USD 1,403,425 • UK: sell 20,866 Base packages of the total value of USD 760,107 • USA: sell 93,502 Base packages of the total value of USD 3,406,159	• Sell 1,285 Premium packages of total value of USD 149,933 and charge 349 Customisation fees of the total value 17,431 by the end of 2023 in Ukraine
Year 5	• Ukraine: sell 91,262 Base packages of the total value of USD 1,163,594 • +1CIS country: sell 127,371 Base packages of the total value of USD 1,623,985 • USA: sell 95,185 Base packages of the total value of USD 3,640,843 • UK: sell 20,866 Base packages of the total value of USD 798,113	• Sell 1,341 Premium packages of total value of USD 164,253 and charge 356 Customisation fees of the total value 17,780 by the end of 2024 in Ukraine

KPIs			Year 1	Year 2	Year 3	Year 4	Year 5
LTV	USD	Base	31	33	35	36	38
		Premium	288	302	317	333	355
Retention	months		3	3	3	3	3
CAC	USD		5.10	0.72	0.80	0.68	0.60
NPS	-		8.5	9	9	9	9

Competitive advantage

InstaTop's main competitive advantages are AI-powered technology and good analysis of the Russian language. Most of our competitors are good at analyzing English content and not many have AI algorithms.

Competitive advantage table	Valuable	Rare	Inimitable	Non-substitutable
AI-powered	yes	yes	yes/no	yes/no
B2C and B2B offers	yes	no	no	no
Russian language analysis	yes	yes	yes/no	yes/no
Customisation	yes	no	no	no
Virtual assistant (Mobile apps)	yes	yes	yes/no	no

Product-market growth matrix by Ansoff



Year 1 - Diversification

Goal: to launch a unique product with a solid point of difference (unique selling proposition). According to the product-market growth matrix by Ansoff, InstaTop is joining the New market with the New product (Diversification strategy). Main strategic points of diversification are: AI based technology of analyzing Russian content.

Year 2-3 — Market Development

Goals: enter new geographic areas. During the second year of development InstaTop will join the new Market with the existing product (Market development strategy). During the third year of development InstaTop will continue implementation of the Market development strategy and target a new geographic area by adding +1 CIS country, UK & USA.

Year 4 and Year 5 — Market Penetration

Goals: gain customers from competitors, increase Retention rate and frequency of purchases from existing customers. The fourth and the fifth years of operations InstaTop will add new social networks and new features to the existing products to gain customers from the competitors, increase retention rate and frequency of purchases from existing customers.

4.5. Sales plan

The financial model and sales forecast is built based on basic pricing of monthly subscriptions 10 (+/-2) USD for the Base product and 100 (+/-2) USD for the Premium product.

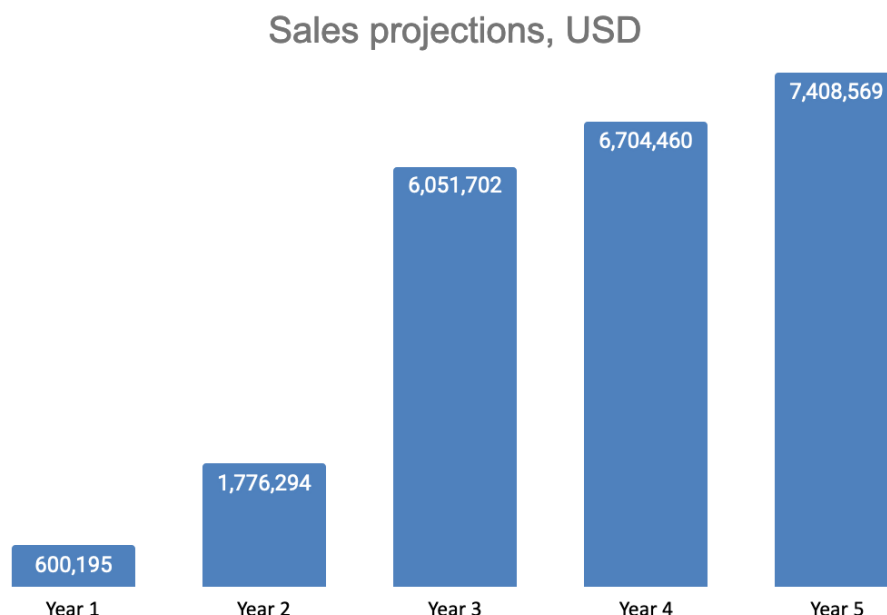
The following assumptions were made:

- Average retention rate is 3 months (one customer will pay for subscription of minimum 3 months);
- InstaTop will convert 0.5% of target audience in Instagram for the Base product, 0.1% of Base users will become Premium users, we can convert 0,1% of B2B segment for the Premium product; 0,1% of B2B segment users will need Customisation;
- During the 2nd year of operations InstaTop can enter +1 CIS country,
- During the 3rd year of operations we can enter USA & UK markets.

The forecast of sales does not include potential income from:

- Results of PoC and MVP stages, Marketing campaign tests;
- The results of A/B tests to define the best converting price;
- Purchases for longer subscription periods (with higher average check);
- Audience from other social networks (e.g, Facebook).

The graph below shows sales forecast for 5 years of operations based on the assumptions mentioned above:



4.6. Pricing analysis and benchmarking with competitors

InstaTop enters the market using the combination of going rate pricing & odd number pricing strategies. There is no product on the market which would provide exactly the same range of

features. The research showed that among indirect competitors (SMM analytics software) the pricing ranges can be broken down into three groups: 1) USD 7-50; 2) USD 87-99 and 3) USD 200+ for monthly subscriptions:

Worldwide	Units	Price, 2019
< 50 USD		
popsters.ru	USD, mo	7
tailwindapp.com	USD, mo	10
hootsuite.com	USD, mo	19
tweetreach.com	USD, mo	49
< 100 USD		
agorapulse.com	USD, mo	87
sproutsocial.com	USD, mo	99
audiense.com	USD, mo	99
keyhole.co	USD, mo	99
>100 USD		
quintly.com	USD, mo	300
socialbakers.com	USD, mo	200

When the company needs to increase an average check, it rarely does it by increasing the price for the basic packages (apart from short-term promos), but rather by a) adding more features at an additional cost; b) introducing premium packages with more functionality; c) introducing generous discounts for longer subscriptions; d) offer an additional services at an additional cost.

InstaTop financial model is based on two packages — the Base and the Premium, plus an additional service (Customization). The Base package pricing lies in the 1st group (<50 USD), its monthly package costs 10 USD (+/- 2 USD). The Premium package lies in the 2nd group (<100 USD), its monthly package costs 96 USD (+/- 2 USD). A series of A/B tests should be run to define the price with the highest conversion rate.

The financial model suggests annual increase of prices on the Base packages by 5%. This is the increase which is usually not significant for users and doesn't affect volume of sales.

InstaTop will also introduce a fee of 50 USD for additional customizations (e.g., custom reports, custom number of channels analyzed, etc.).

4.7. What has been done so far and what's planned

From the marketing standpoint the following steps have been done:

- Market Segmentation;
- Target Segments;

- Positioning for each Target segment for each Product ;
- Competitive advantages;
- SWOT analysis;
- Marketing Mix (Product, Place, Price Promotion);
- Sales plan.

When the product is ready for distribution, the following needs to be finished for successful marketing activities before promotion stage:

- Test Marketing channels to verify CR, calculate final CAC
- Create Brandbook and Press Kit;
- Prepare creatives (banners and videos for ads, infographics);
- Prepare text material (press releases, native ads);
- Define the list of business and marketing magazines and agree on pricing and placement;
- Find and sign up agreements with SEO and Marketing agencies;
- Develop the website and prepare App Store accounts for digital distribution.

Section 5: ORGANIZATIONAL PLANNING

There are 5 functions in the organization which will be covered by inhouse teams (financial, legal, accounting, data science and product development) and 3 functions (SEO, marketing and recruiting) to be outsourced.

In total 20+/-2 team members need to be hired. InstaTop will outsource recruiting functions to recruiting agencies. HR function is fulfilled by team leads and is controlled by the CEO by performing semi-annual Gallup Q12.

Management of the product development is done through the following key activities:

- 3-months strategies with monthly M&O sessions (monitoring and optimization) for the company;
- department-specific OKRs (Objectives and Key Results) for all teams;
- SCRUM 1-week sprints for Product and Data Science teams;
- weekly reports for SEO and Marketing agencies.

InstaTop will offer standard yet competitive for the IT industry employment conditions with 24 paid vacations, paid working holidays and 8-hour working days with a semi-flexible schedule.

5.1. Organizational structure (diagram + description)

The core team of the company consists of Natalya Pedchenko, whose expertise allows her to combine both roles of CEO and CFO, and Anna Shvetsova, who will combine the roles of CMO, Product Owner and Business Development manager.

Product department

InstaTop will hire an internal technical team and the team of SMM specialists to develop the product. We need a CTO who will perform the roles of Project Manager and Team Lead for the technical department. The rest of the team are: two backend and two frontend developers for the core product, UI/UX designer, one Android and one iOS developer and two QAs.

Data Science department

The company will need two Data Scientists and two Data Analysts to design the product. One linguist is required as well.

Marketing department

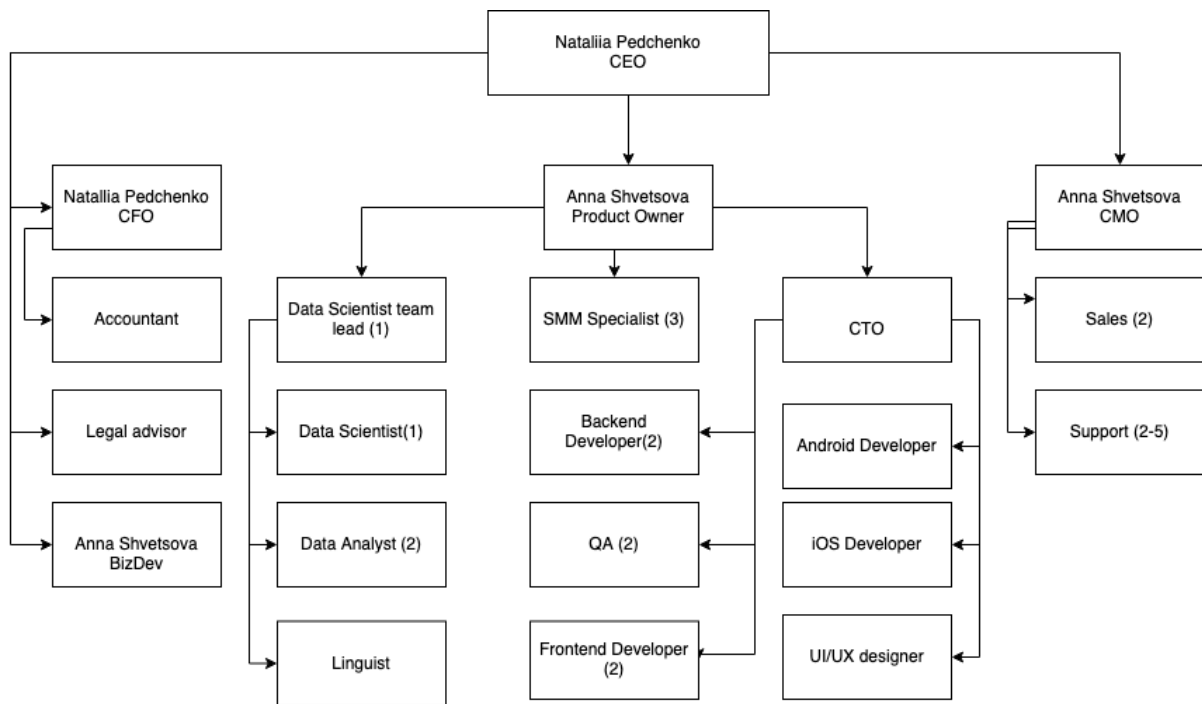
Anna Shvetsova will fulfill the role of CMO, however we will not have a marketing team internally. InstaTop intends to cooperate with marketing agencies who will render advertisement services. Anna's role as CMO will be to coordinate the work of the agencies and in-house marketing activities. Two Sales representatives will also report to CMO as well as Customer support specialists.

Legal department

InstaTop will also hire one Legal Advisor who will report to CEO Natalya Pedchenko.

HR department

As InstaTop is not a big team, HR function will be fulfilled by the team leads. Recruitment function is outsourced to recruiting agencies.



5.2. Personnel management

InstaTop does not have a big team from the very beginning and managers will be combining several roles including personnel management for their teams. All the team leads will participate in creating 3-month strategies and review them all together on a monthly basis at M&O sessions. Moreover, they are required to have regular one-2-one meetings with their subordinates to ensure the level of motivation is high.

CEO will run semi-annual anonymous Gallup Q12 questionnaires to measure employees' engagement. Gallup analyzed 35 million people to develop this survey, and the Gallup Q12 is considered to be the most efficient way of understanding if something is going wrong in the team. Recruitment function will be outsourced, thus team leads' main task is to ensure efficient work of their teams and keep the motivation level high.

Each department will have its own OKRs (Objectives and Key Results) on quarterly basis and the bonuses based on the fulfillment of OKRs.

Data Science and Product teams use SCRUM framework to organize their work and run 1-week sprints.

5.3. Overview of Personnel and HR policies

All HR processes and policies will be reflected in Zoho HR system. Since InstaTop will not hire an HR manager, all the HR functions will be distributed between Team Leads and will be automated wherever possible.

Employment conditions

Employees are employed full time with a trial period of 1-3 months depending on the position. After the trial period is passed successfully, employees are getting employment benefits which is:

- The contract for IT services signed;
- 24 days of paid vacations;
- Bonuses based on performance;
- 5 days of paid sick leave without official confirmation of sickness;
- 1 day per week — possibility to work remotely;
- Official government holidays are days off;
- Corporate events & team-building activities;
- Education (conferences, courses, workshops) paid by company (up to \$500 per person per year).

HR policies

Onboarding

- Team leads are responsible for successful onboarding of their new team members;
- The first day of work is dedicated to meeting new teammates and learning HR policies;
- Each new team member is handed a printed HR Handbook explaining corporate culture, vision & mission of the company and basic principles of HR policies.

Working

- Working schedule is 5 days a week, Monday through Friday (except holidays);
- 8 working hours, arrival no later than 11 am;
- Possibility to take vacations in advance (no more than 2 days in advance);
- Vacations should be taken within a year (cannot be accumulated);
- Overtimes are not welcomed, but will be compensated if the company explicitly asked for overtimes;
- Annual performance evaluation and salary increase review is performed every December by Team Leads for their subordinates;
- The system of performance bonuses is developed individually for each department and is based on OKRs;
- Salaries are paid within the first 5 working days of each next month;
- Unified timesheet template is being filled in by each Team Lead.

Termination

- Termination notice should come from an employee or the employer 14 days in advance.

Changes to HR policies

- HR policies are subjects to change.
- Any change should be agreed at the C-level meeting and then communicated to the team via corporate email.

5.4. Overview of personnel recruitment needs and sources

Key functions will be performed by the founders Natalya Pedchenko (CEO, CFO) and Anna Shvetsova (CMO, PO, BizDev). In total 20+/- 1 people need to be hired through recruiting agencies.

InstaTop will hire internal Product and Data Science teams, while SEO, marketing and recruiting functions will be outsourced to SEO, marketing and recruiting agencies correspondingly.

Product team recruitment needs are:

- 1 CTO
- 2 backend developers
- 2 frontend developers
- 1 iOS developer
- 1 Android developer
- 2 QAs
- 3 SMM specialists
- 1 UI/UX designer

Data Science recruitment needs are:

- 2 Data scientists
- 2 Data analysts
- 1 Linguist

InstaTop will also need one Legal Advisor and one Accountant, however considering the importance of these roles, the founders will be looking for a Legal Advisor and Accountant of high professional competence supported by recommendations.

Section 6: FINANCIALS

To launch the company the founders shall raise USD 350,000 from two equity investors to cover the costs of the first 6 months of operations. InstaTop is expected to generate profits during year 2 upon the launch of its Base and Premium Products during year 1; the company will pay the dividends (50% of the profit) on an annual basis starting from year 2. The estimated return on investment will be 2.8 times in 3 years. The rest of the profits will be retained in the company to finance its operations, development and launch of the products on the new markets.

InstaTop will not be a capital intensive project to stay fast and flexible in terms of both technological solution and IT infrastructure (cloud service will be used — OpEx). Moreover, the company is not supposed to use debt in its operations.

InstaTop's net income will be growing at 94% per year, while the shareholder's equity is supposed to increase at 138% per year.

The company will generate positive cash flow and will hold large amounts of cash and cash equivalents on its accounts — USD 6,189,859 at the end of year 5 — thus staying steadily solvent.

6.1. Financing requirements summary

The project's successful launch and operations will be made possible by involving equity investors at the early stage of project development (year 1). The company's equity structure will be set as follows:

Founder 1 - 25.5% of equity — acting CEO/CFO

Founder 2 - 25.5% of equity - acting CMO/PO/Business Development

Total Founders' Equity: 51%

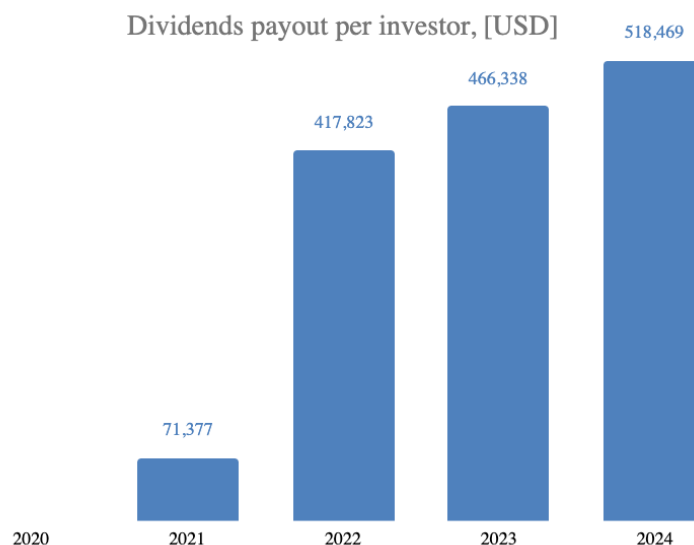
Investor 1 - 24.5% of equity

Investor 2 - 24.5% of equity

Total Investors' Equity: 49%

Each equity investor is supposed to provide financing of USD 175,000 for 24.5% of equity; the total amount to be invested in exchange for 49% of equity is USD 350,000.

The dividends will be paid out annually at 50% rate starting from year 2. The full payback of the capital invested is expected between year 2 and year 3 of operations. 42% of investment will be paid back at the end of year 2, while estimated return on investment will be 2.8 times in 3 years.



6.2. Purposes of financing for 1 year, for 5 years (summary) + description

The funds raised from two equity investors in the amount of USD 350,000 are required to cover the costs of the first 6 months of the company operations until the sales start in the second half of year 1. The following initial spendings are essential to create the Base and the Premium Products to be launched for B2C and B2B markets:

- USD 109,527 - 50% of Year 1 OpEx (plus 1 month of marketing budget)
- USD 22,814 – 100% of Year 1 CapEx
- USD 217,660 – 50% of Year 1 Product Team Salaries

During year 1 of operations the company is not expected to make profit yet. Starting from year 2 the company will start generating profit and pay dividends, retaining 50% of the profit in the company. The money kept will be sufficient to finance the company's operations, development and launch of the Base and Premium Products on the new markets during years 2-5. The founders of the company do not intend to raise additional funds till the end of year 5 (the period foreseen by this Capstone Project), as it will not be needed.

6.3. Overview of forecasted Capital Expenditures

The founders of the company have been considering various options of reducing the costs of business and making it to the maximum extent efficient. For the industry of technological startups cloud services may be a good solution. Instead of launching a capital intensive project with a sophisticated and expensive IT infrastructure, it makes more sense to use AWS, Azure or another cloud service. Since InstaTop is a technological startup to be working in a competitive industry, it should be fast and flexible in terms of both technological solution and infrastructure to support it, being able to scale or reduce when needed in the most cost efficient way.

Since the founders decided to minimize CapEx, the list of the fixed assets planned comprises primarily the equipment required for the project personnel to perform their duties, namely:

- MacBook Pro (1);
- Asus Notebook (19);

- Lenovo Notebooks Thinkpad (4);
- iPhone 11 (iOS, test) (1);
- Samsung Phone (Android, test) (1);
- MFU Canon (1);
- Shredder Canon (1).

All the items listed are intended to be exposed within 2 years of operations, thus the fixed assets purchase shall be repeated in year 3 and year 5.

The total amount to be spent on CapEx during 5 years of project operation is USD 68,442.

6.4. Overview of Operating Expenses forecast

The company's operating expenses shall be incurred in the course of normal business operations and comprise the following categories:

- **Payroll: Marketing, Legal & Finance**
The cost of personnel is at its maximum in year 1 due to the launch of business operations. Starting from year 2 the cost of personnel will significantly decrease (from USD 121,277 to USD 99,521 per year), since the founders shall renounce their salaries when the company starts generating profit.
- **Marketing budget**
The company's marketing activities will start right before the estimated date of the Base and Premium Products release – approximately after 6 months of the project operations. The marketing expenses will be at their lowest in year 1 (USD 78,050) and will reach their maximum in year 3 (USD 183,800) when the new markets are added. The marketing budget will be distributed in the following way: 50% - advertisement, 25% - sales promotion, and 25% - public relations.
- **Office related costs: office rent, stationery and office supplies, Internet, and utilities**
The company will demonstrate quite a modest approach to office costs planning by keeping them at the minimum level sufficient for the company's effective operations. At the same time InstaTop will follow industry trends for the startup operations, thus part of employees may be involved on a remote basis (distributed workforce approach).
- **Travel expenses**
To promote InstaTop brand to wider audiences it is important to take part in the top technology events in the USA and Europe at least 2-3 times per year. Travel expenses budgeted in this category comprise the estimates of the founders' international flights, accommodation, meals&incidentals, and medical insurance.
- **HR and representative expenses**
The company will hire a professional recruitment agency to search for the tech and marketing personnel. Some modest budget is also foreseen as perks for employees including coffee/tea, team building events, etc. Also, the costs of business meetings are added into this category.
- **Cloud services**

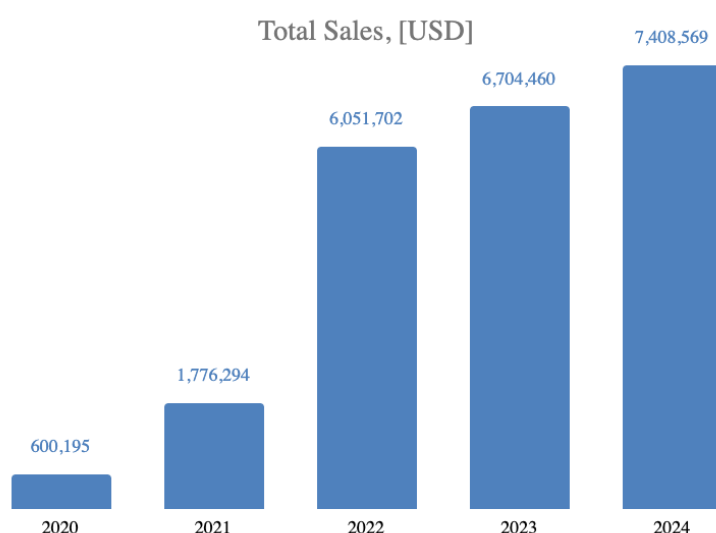
The company's strategic approach lies in using cloud services as opposed to building its own IT infrastructure, thus making it less capital intensive and letting it make the Base Product launch within the shortest time possible.

The total amount to be spent on OpEx during 5 years of project operation is USD 1,725,749.

6.5. Overview of Profit and Loss Statement

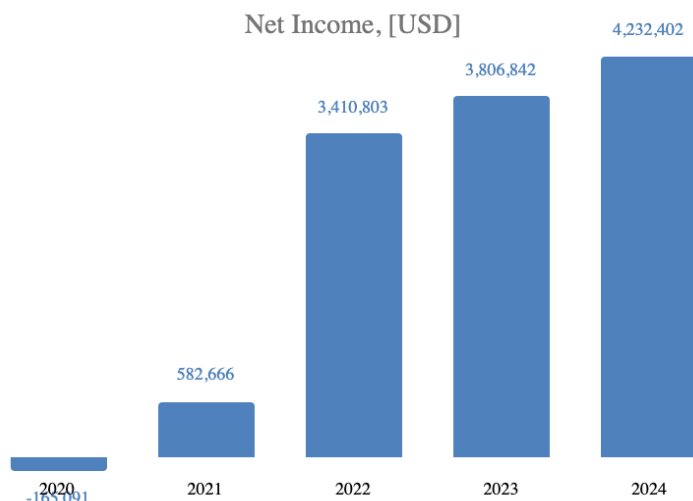
The most visible conclusion from InstaTop Income Statement is the fact that the company is expected to launch robust sales of the Base and Premium Products during the first year of operations. It is a good indicator demonstrating the founders' understanding of the growth hacking concept and its importance for technological startups. The founders are ready to experiment with marketing instruments and product development to get a lot of customers on board within the shortest time possible and to cultivate loyalty among them.

InstaTop **revenues** are expected to increase at 87% per year. With the overall revenue growth, **gross profit** will be showing a positive trend as well - increasing at 204% annually. Such a substantial difference between the two is provided by the fact that the **cost of sales** is supposed to grow at a much smaller pace - 11% annually.



The **operating profit** is expected to grow at 93% per year and **Operating Profit Margin** will increase from 48.8% in year 2 to 83.8% in year 5, while **SG&A** will grow only 8%.

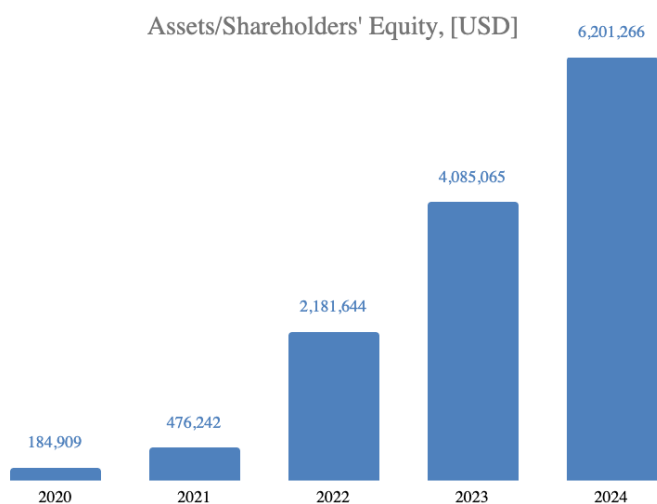
The company is supposed to generate profits starting from year 2 of operations. InstaTop **net income** will be growing at 94% per year, **Net Profit Margin** will improve from 39.4% in year 2 to 68.6% in year 5.



6.6. Overview of forecasted Balance Sheet

The most visible conclusion from InstaTop Balance Sheet is the fact that the company is not going to use debt in its operations - neither short-term nor long-term. Most of the company's assets are liquid - the share of cash and cash equivalents will amount to 98%-100% within the first 5 years of the project development. It is a good sign, since the company will not depend on creditors and will not put itself at risk of rising interest rates.

Since the company is going to generate profit from year 2 of operations, the shareholder's equity is supposed to grow at 141% per year.



Return on Assets will reach its peak of 156% in year 3 as a result of surge in sales of the Basic Product on the new markets.

The founders of the company would have to decide what to do with cash accumulated during 5 years of operations - either invest it in new products or pay dividends to shareholders.

6.7. Overview of forecasted Cashflow Statement

The most visible conclusion from InstaTop Cash Flow Statement is the fact that the company will hold large amounts of cash and cash equivalents on its accounts thus staying steadily solvent. The company's potential ability to generate positive cash flow is a good indicator for investors.

It is worth noting that the main cash in-flows will be obtained from operating activities, thus demonstrating quite a healthy approach to building a sustainable business. The main cash outflows will be made within the company's financing activities, namely the dividends payout to the shareholders.

The total amount of cash to be accumulated on the company's accounts at the end of year 5 of operations is USD 6,189,859.

6.8. Overview of the financials in case of pessimistic scenario

Risk assessment and mitigation matrix (paragraph 7.3.) points to the most important risks based on impact and probability, namely (1) the risk of no market need, (2) the risk of running out of cash, and (3) the team. While the risks 1 and 3 shall be dealt with in a more or less radical way, the risk 2 is worth preparing an alternative financial model. The key assumptions for the pessimistic scenario is:

- InstaTop sells half as much as initially planned;
- InstaTop runs out of cash due to low sales.

The most visible conclusions from the pessimistic financial statements are as follows:

- The company starts generating profit a year later - from year 3;
- Due to lack of cash, more invested capital will be required (USD 400,000) and more share will be offered to investors (28% to each);
- The dividends will be paid out starting from year 3;
- The payback period for investment will be 1.8 times in 4 years and 4.5 times in 5 years.

Conclusion: even with sales significantly less than planned (half of that in realistic scenario) the project still makes sense for the founders and investors.

6.9. Startup valuation - First Chicago Model

To perform InstaTop startup valuation the First Chicago Method was used. This method assumes that the value of the startup is equal to the sum of DCFs for each scenario multiplied by their probabilities. The following scenarios were considered for the valuation:

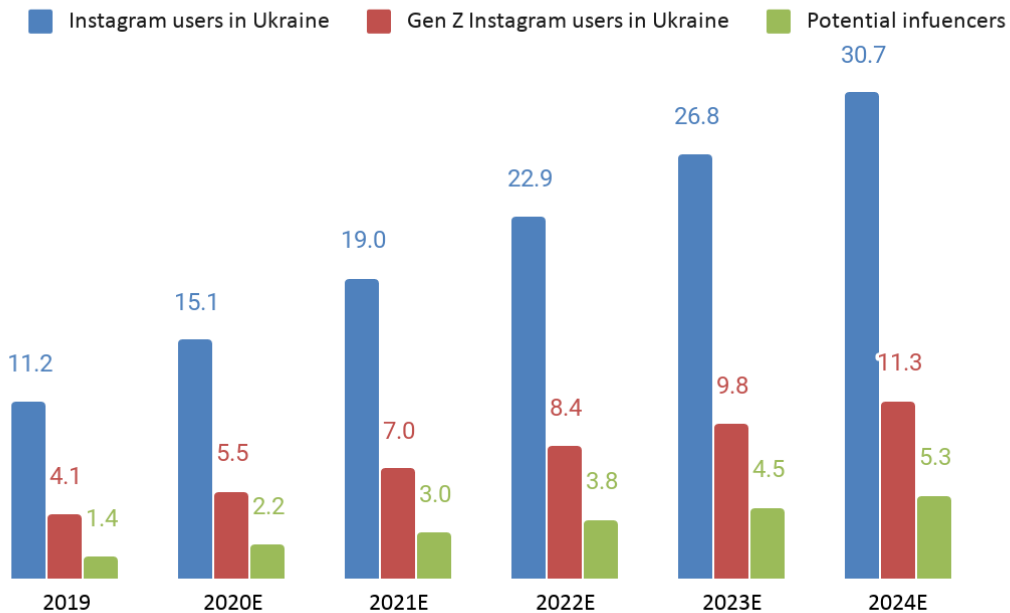
- Realistic;
- Pessimistic (InstaTop sells half as much as initially planned);
- Worst (InstaTop fails).

A conservative approach to setting the probabilities was applied: 40% - realistic scenario, 30% - pessimistic, 30% - worst (since 90% of startups fail). Based on First Chicago Method the value of InstaTop startup is equal to USD 4,020,407.

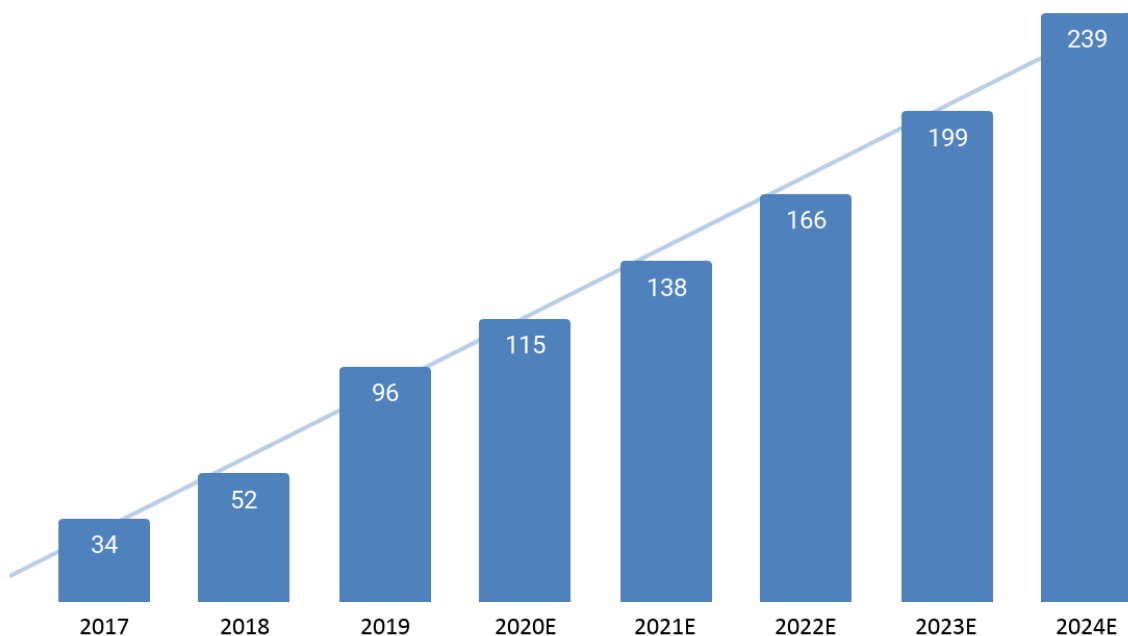
Section 7: SUPPLEMENTS

7.1. Market Research Data tables

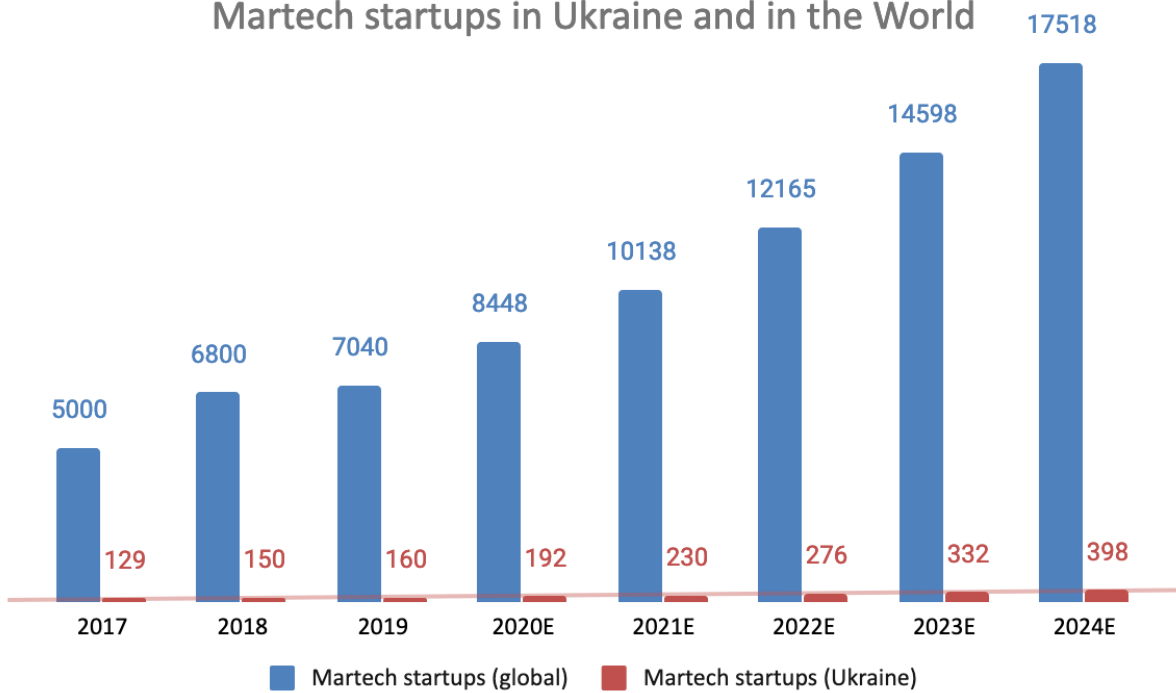
B2C Market Size, Ukraine (Potential Influencers, mln users)



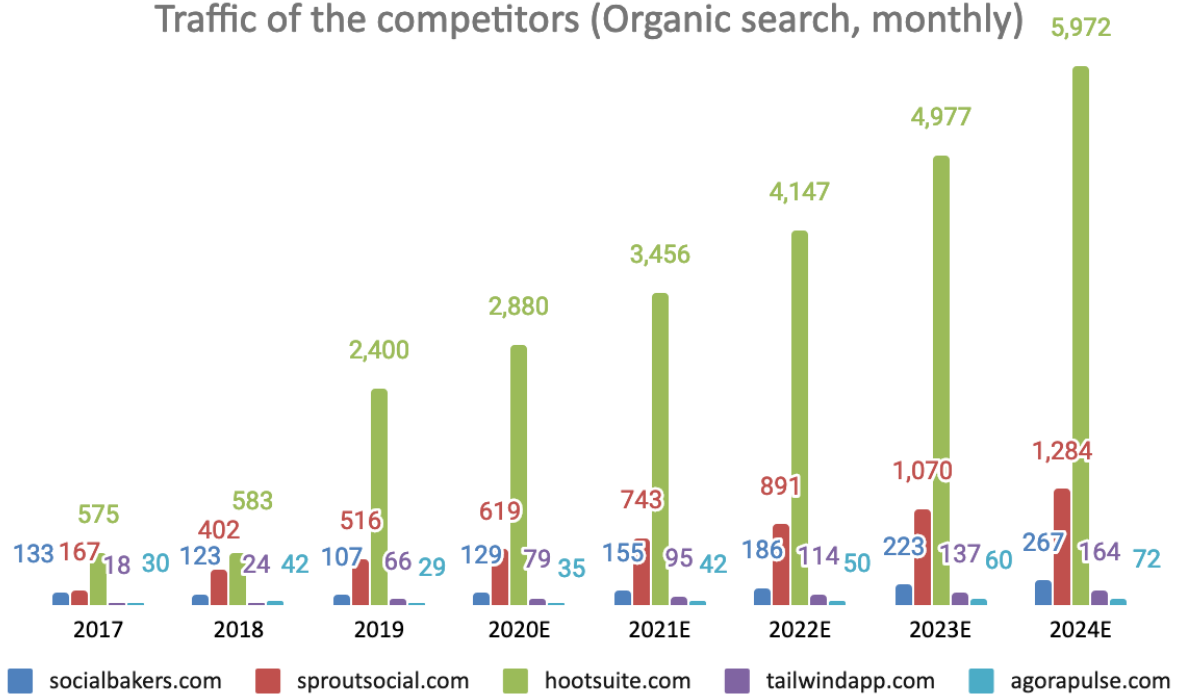
North America and UK Martech industry market size, USD bln



Martech startups in Ukraine and in the World

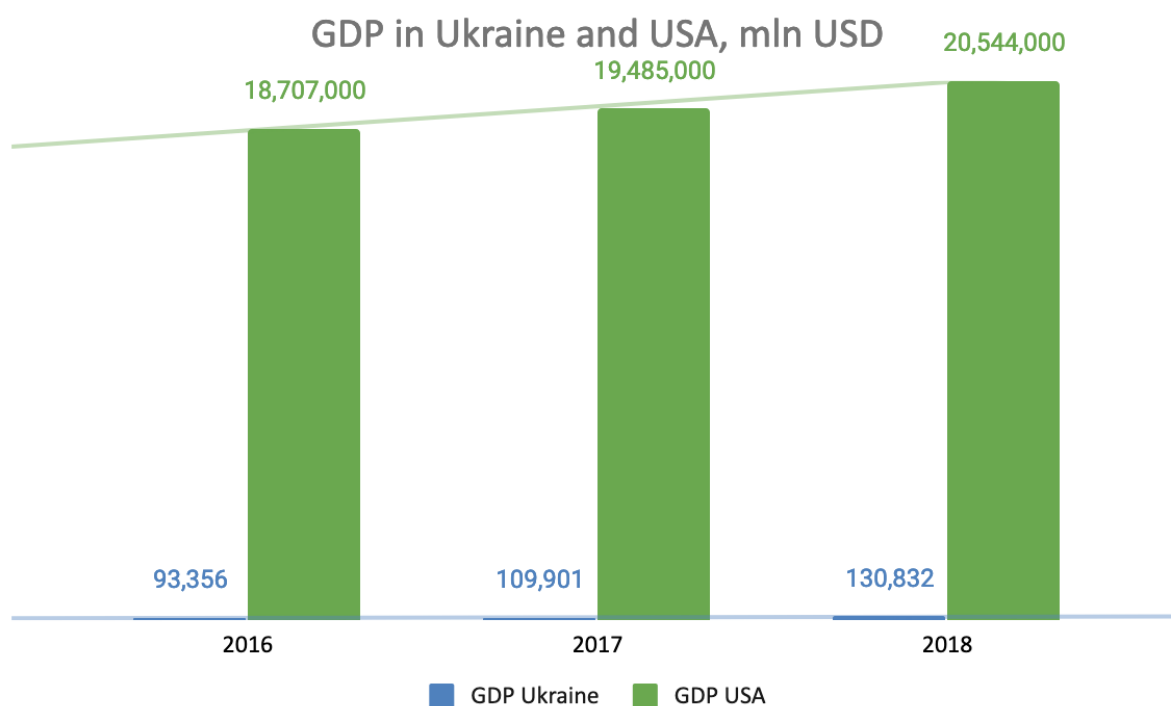


Traffic of the competitors (Organic search, monthly)

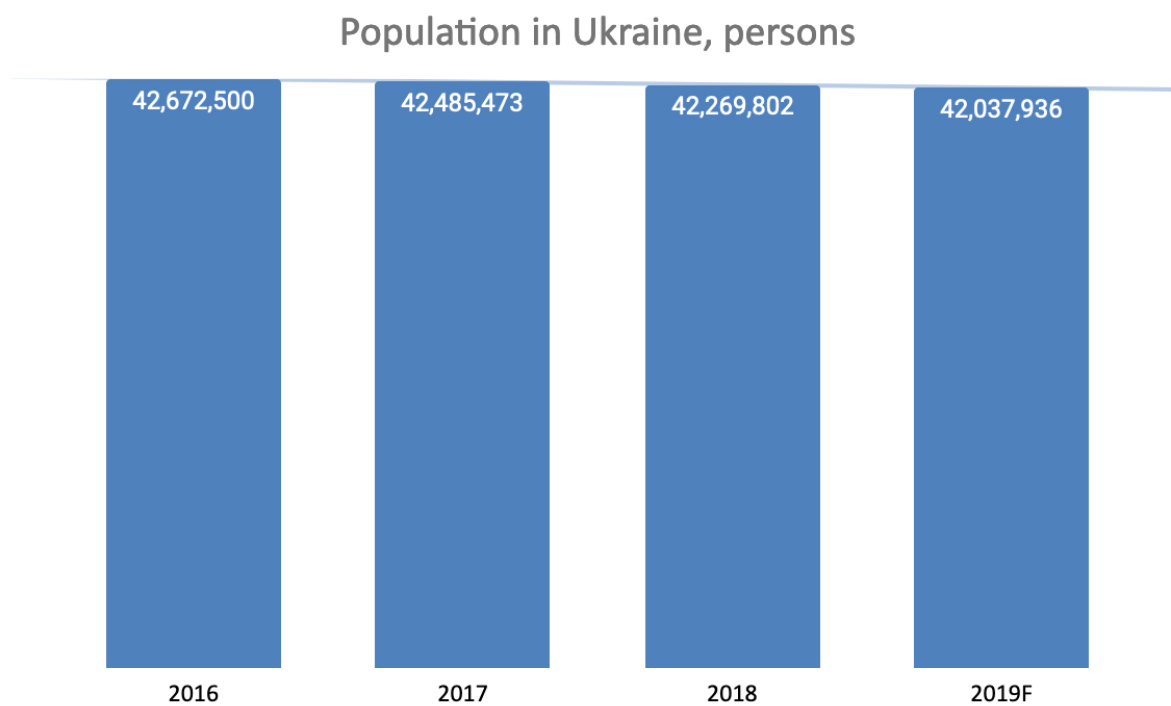


7.2. Macroeconomics research

7.2.1. Economic factors

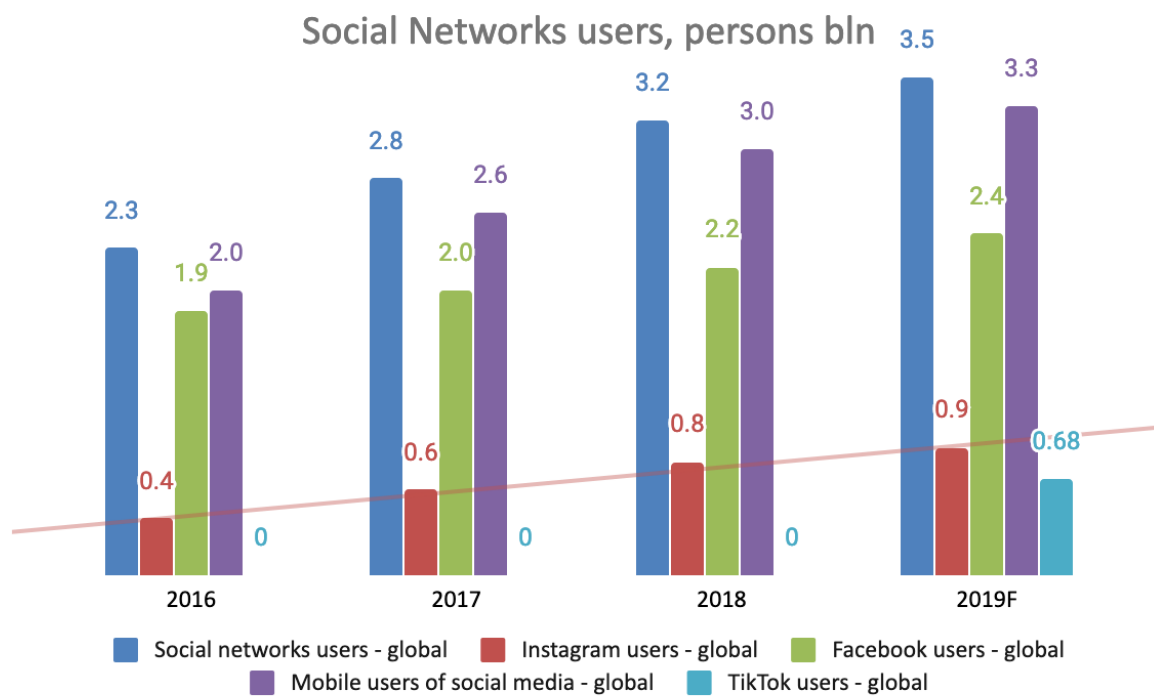
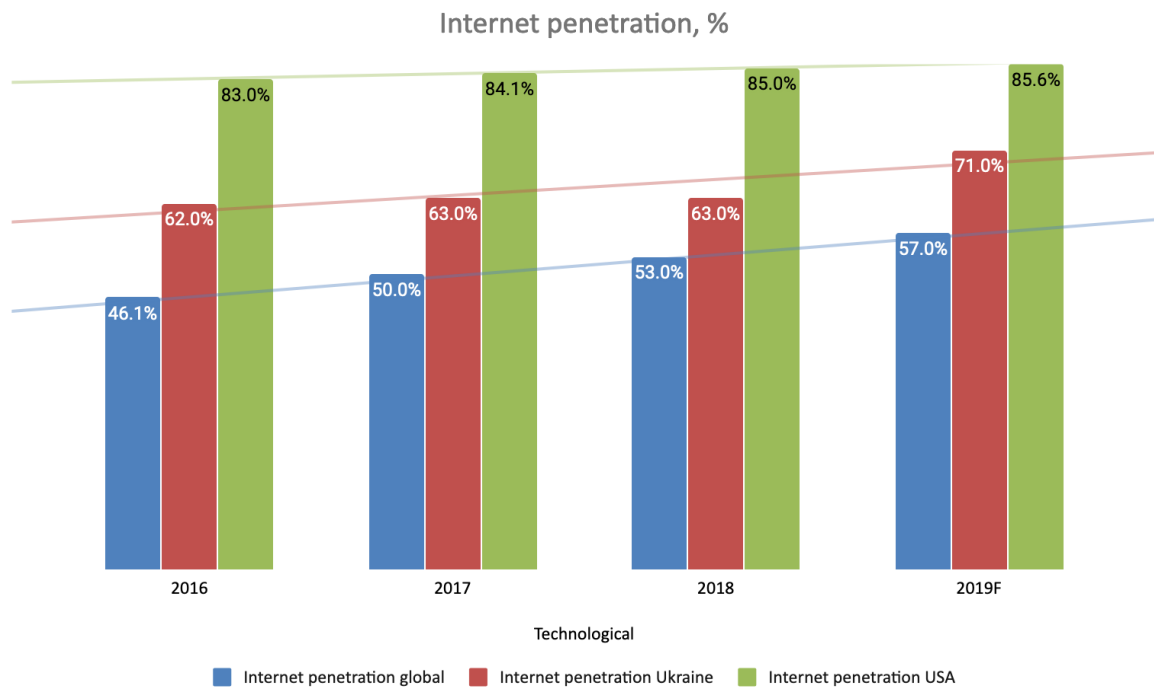


7.2.2. Social factors





7.2.3. Technological factors



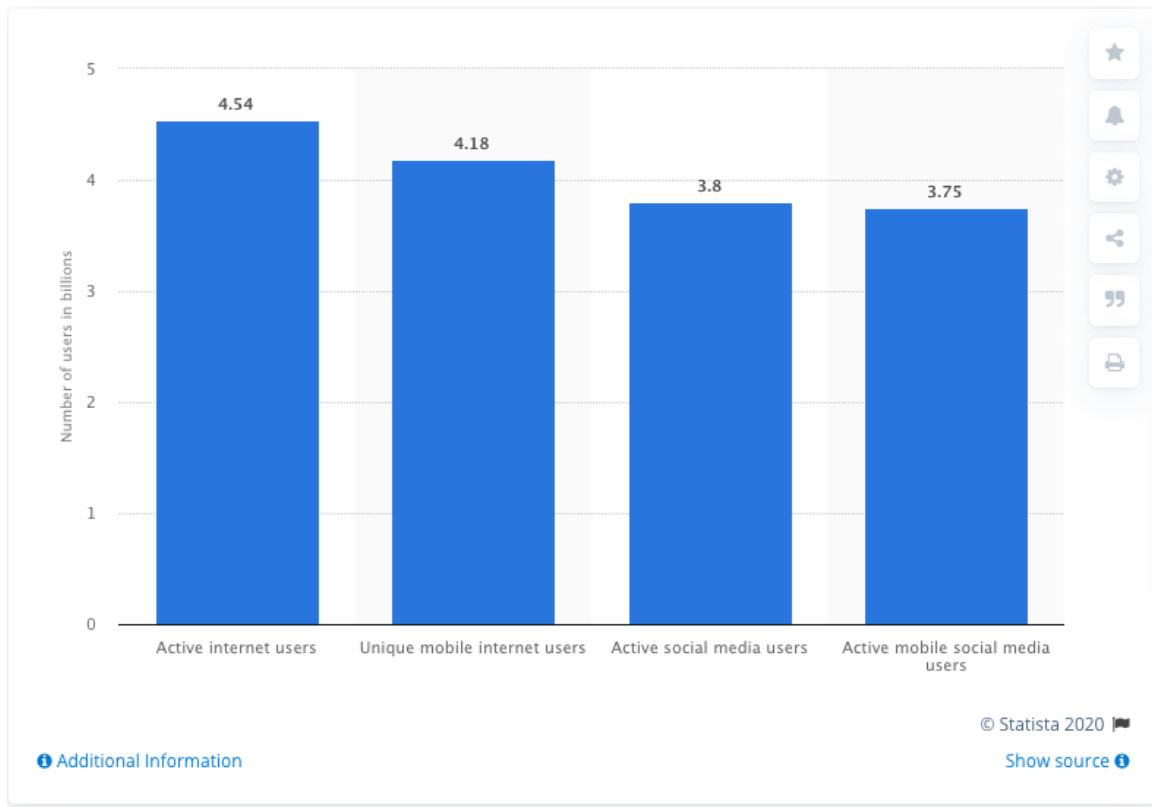
7.3. Risk assessment and mitigation

Type	Description	Probability	Impact	Total Ranking	Priority	Mitigation	Risk owner
Strategic	1) No market need - startup cannot find a Product-Market-Fit	3	5	15	Average	PoC, MVP stages with continuous customers' feedback on each iteration, do successful pivoting	PO
Financial	2) Ran out of Cash - the startup is overspending or is not growing as expected (low sales)	4	4	16	High	Add additional geographic areas and social networks (FB, TikTok), iterate, engage more investors	PO, CEO, CFO
Operational	3) Not the right team - not enough expertise to execute (CTO - TBD)	1	4	4	Low	The founders are sufficiently skilled, the only person missing is CTO: we will use our connections in IT industry to find a competent and fully committed person	CEO
Strategic	4) Getting outcompeted - the competitor will launch AI and App	4	3	12	Average	Launch fast, innovate further, monitor competition	PO, CEO
Operational	5) Pricing & Cost Issues - the price people are ready to pay does not cover costs and the margin	2	3	6	Low	Regular financial monitoring; Get the regular customer feedback on pricing & satisfaction	PO, CEO, CFO
Operational	6) User-unfriendly product - the App is not intuitive	1	3	3	Low	Develop PoC & verify with potential customers, do regular hypotheses testing, A/B testing	PO

						and pivot until we get the expected conversion	
Strategic	7) Failed geographical expansion	1	3	3	Low	Learn from our failure and explore Spanish language market	PO, CEO
Operational	8) Data availability	1	3	3	Low	If Instagram closes API completely or blocks the scraper we use, we create a new scraper and search for alternative sources of data	CTO
Strategic	9) Instagram availability in CIS	2	5	10	Low	If Instagram is blocked in some CIS countries, we will switch to other geographic areas or other social networks	PO, CEO
Operational	10) GDPR compliance	1	3	3	Low	Anonymize the data scraped and analyze only the information about the category, not a particular influencer	CTO, CEO

7.4. List of diagrams and pictures

7.3.1. Global digital population as of January 2020 (in billions)



7.3.2. SWOT analysis

INTERNAL	STRENGTHS	WEAKNESSES
	Virtual Assistant (Mobile App) Russian version (and excellent analysis of RU content) AI-powered technology	Only one Social network covered Only one language analyzed
EXTERNAL	OPPORTUNITIES	THREATS
	New Social Networks New russian speaking countries from CIS New languages (English, Spanish)	Social networks close API New privacy protection policies New competitors with more powerful technology

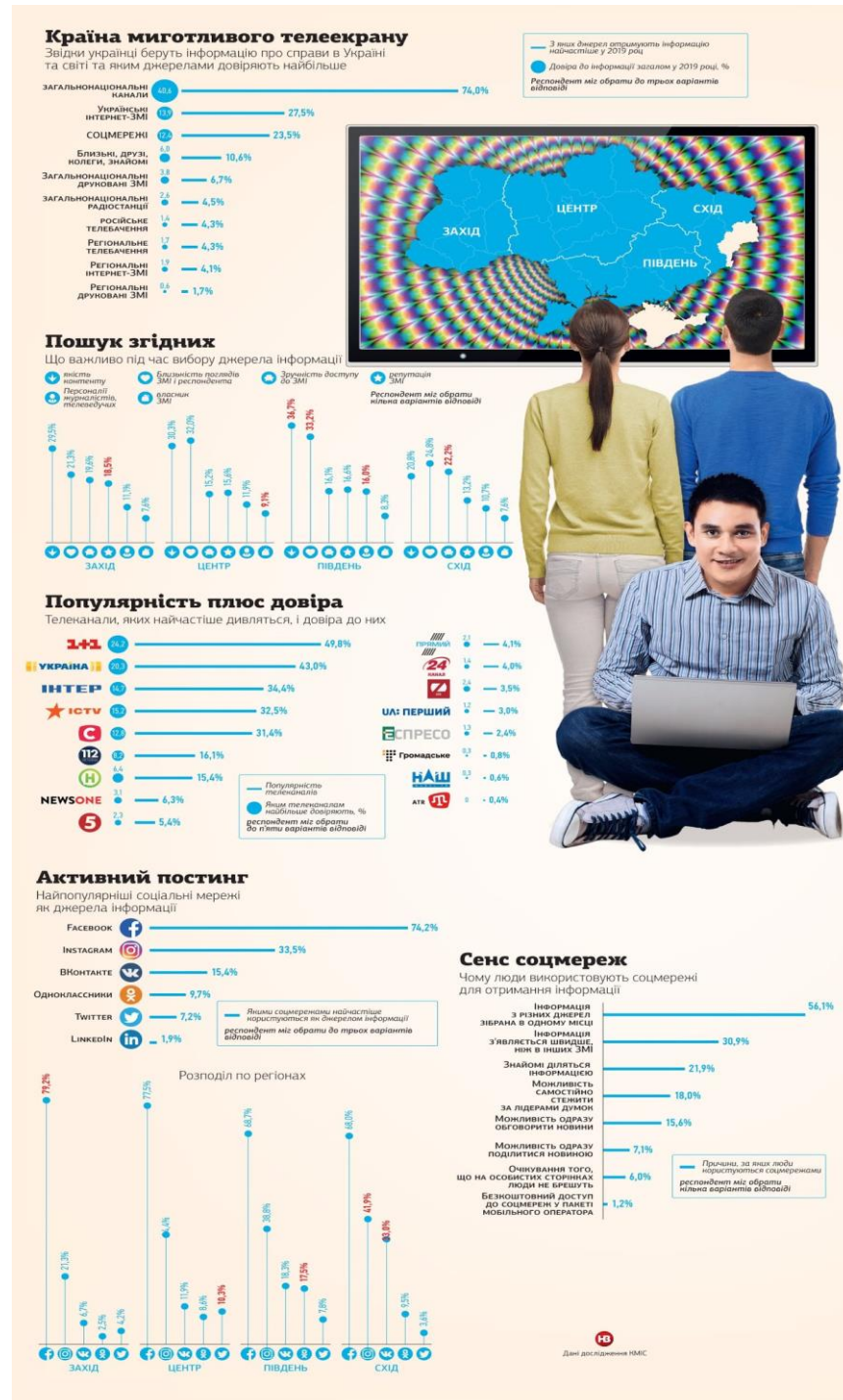
7.3.3. Business Model Canvas

Key Partners	Key Activities	Unique Value Proposition	Customer Relationships	Customer Targets/Segments
Key Partners: Recruitment agency Marketing agency SEO agency Key Suppliers: Hosting providers Cloud providers PR resources CPA networks Ad suppliers	Data Science Product development Customer support Marketing SEO PR Key Resources Physical: computers for employees Human: data scientists, smm managers, developers, accountant Financial: USD 350 k investments	B2C: Content plan suggestions with proven success. B2B: Content strategies based on current trends in specific niche.	1) Intuitive product and creative guidelines 2) B2B - dedicated SMM managers 3) Customer service (emails, chat) 4) Communication in Social networks Channels - path to customers 1. Awareness: digital advertising & PR channels 2. Evaluation: Samples of plans and strategies 3. Purchase: Subscribe on the website or in iOS/Android apps 4. Delivery: PDF format and iOS/Android apps 5. After sales: Customer support (live chat, email)	B2C 1) Gen Z Non-specific and specific topic instagram bloggers 3) Gen Z Users of Facebook/Instagram (secondary) B2B 1) Micro-companies, Private entrepreneurs of classes (J, K, M, N, O, Q)
Cost Structure		Revenue Streams		
INstaTOP - Value Driven company, focused on value creation & premium proposition. Year 1 TOP cost drivers: 1. 64% - product development personnel (COGS) 2. 13% - legal and marketing payroll 3. 10% - advertising costs 4. 6% - office (rent, supplies, utilities & internet) Outsourced functions: marketing, seo, recruiting		Subscription fees Customization fees		

7.5. List of graphic materials from sources used in MBAI capstone

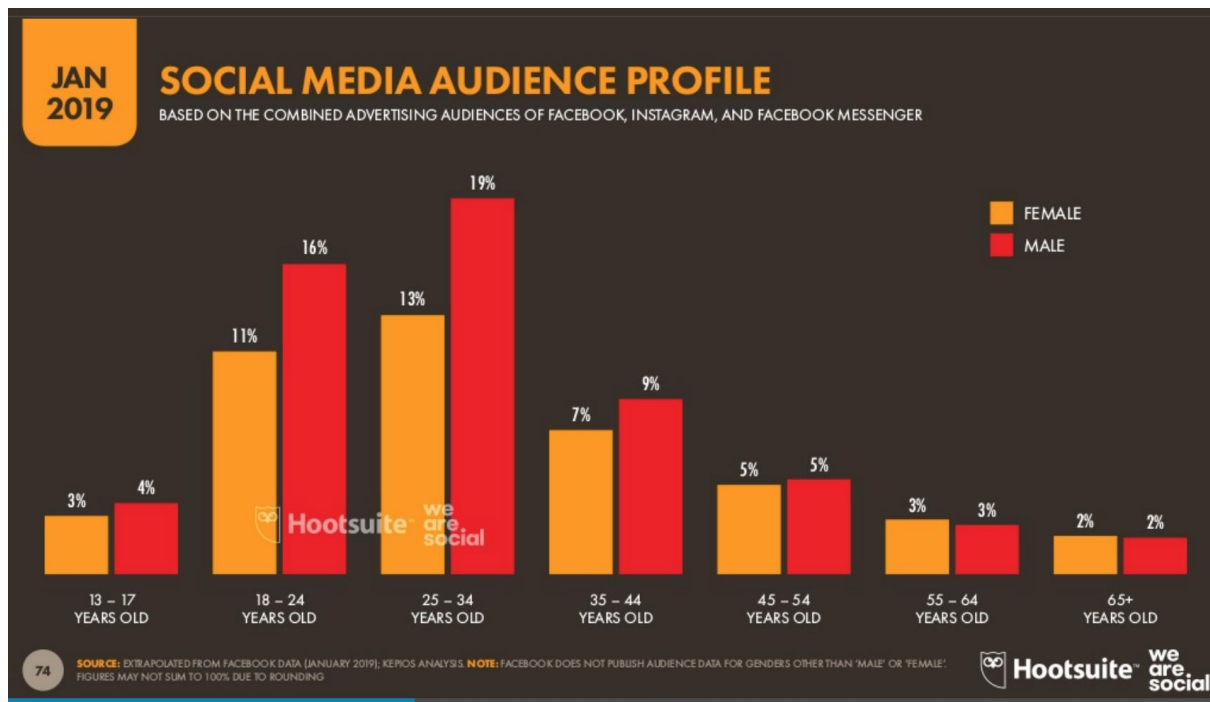
1. Sources of information Ukrainians use

<https://nv.ua/ukr/ukraine/events/telebachennya-vs-socmerezhi-zvidki-ukrajinci-berut-informaciyu-i-yakim-dzherelam-dovirayut-50016100.html>



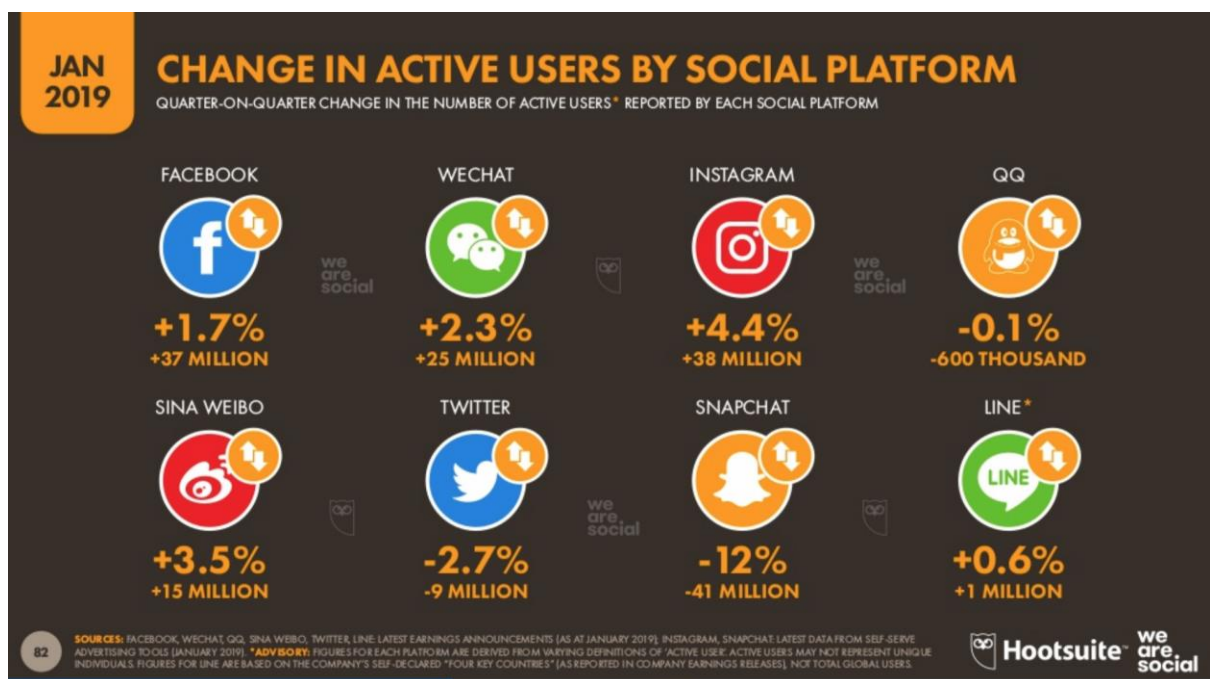
2. Social media demographics – global

https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide



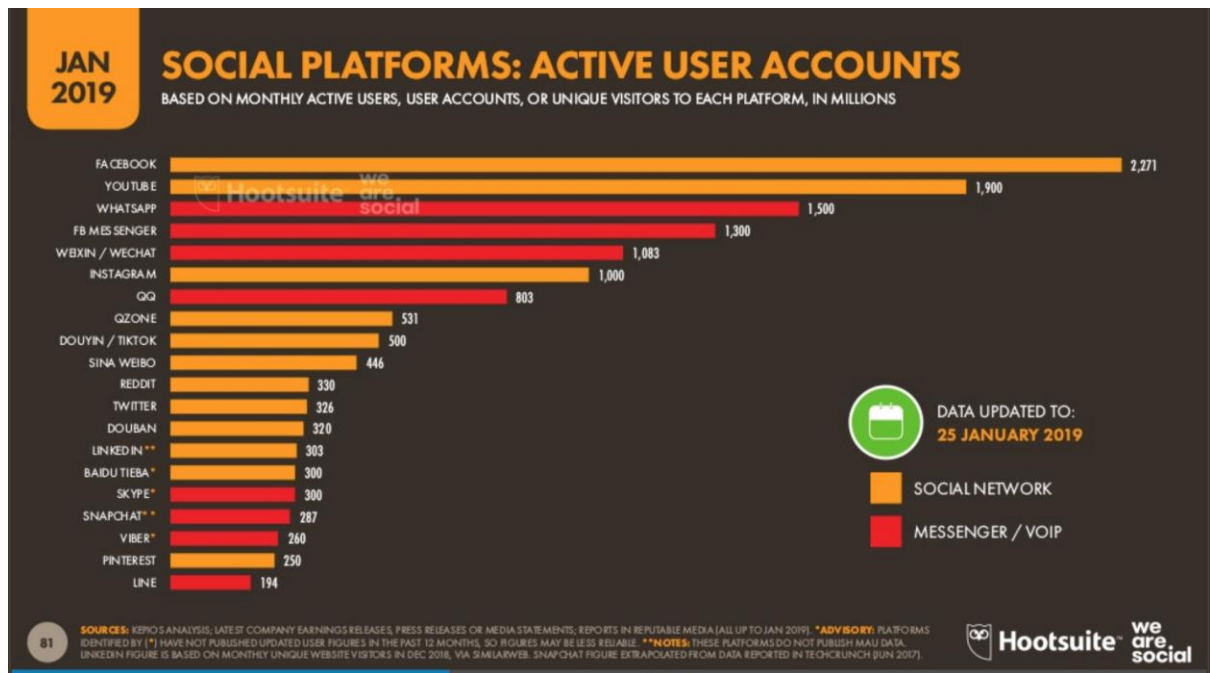
3. Instagram – the fastest growing social network in the world

https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide



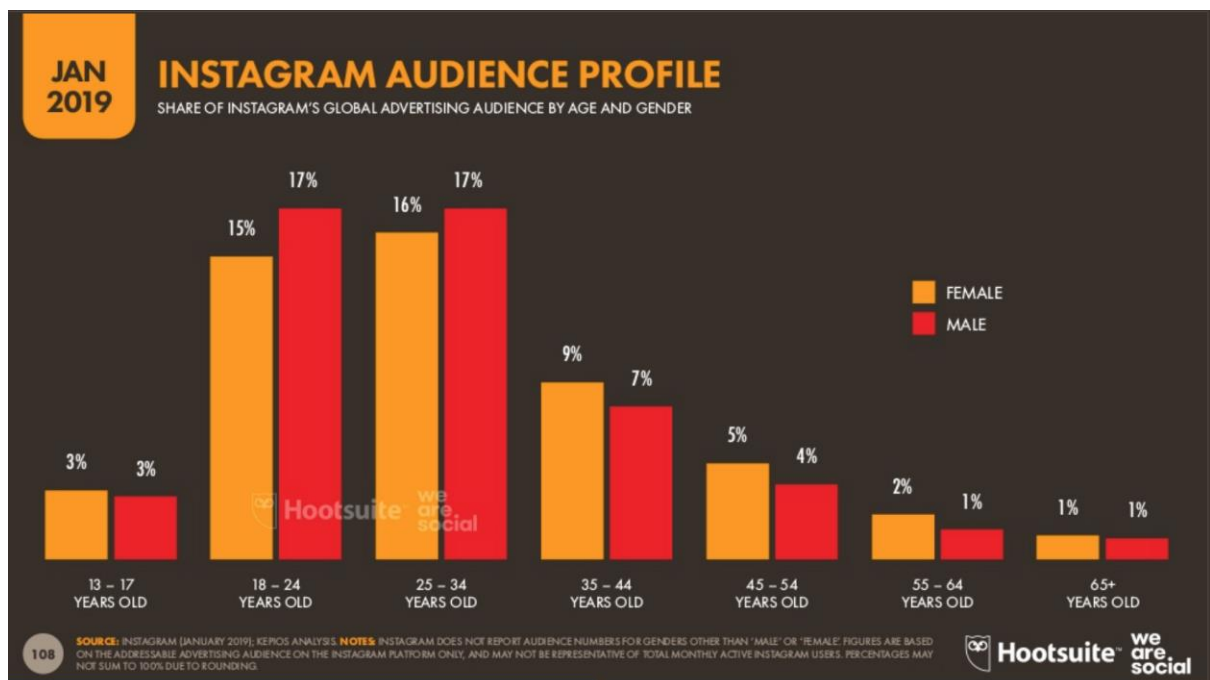
4. Instagram – #3 social network in the world by the number of active users

https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide



5. Instagram Audience (global)

https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide



6. Instagram audience – Ukraine, July 2020

<https://napoleoncat.com/stats/instagram-users-in-ukraine/2019/07>



Instagram users in Ukraine

July 2019



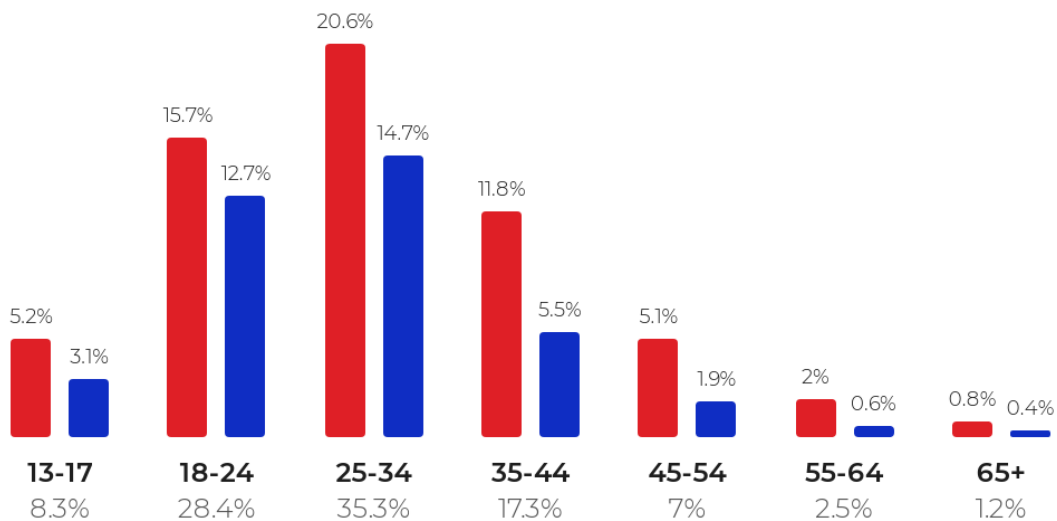
10 200 000



61.1%
women



38.9%
men

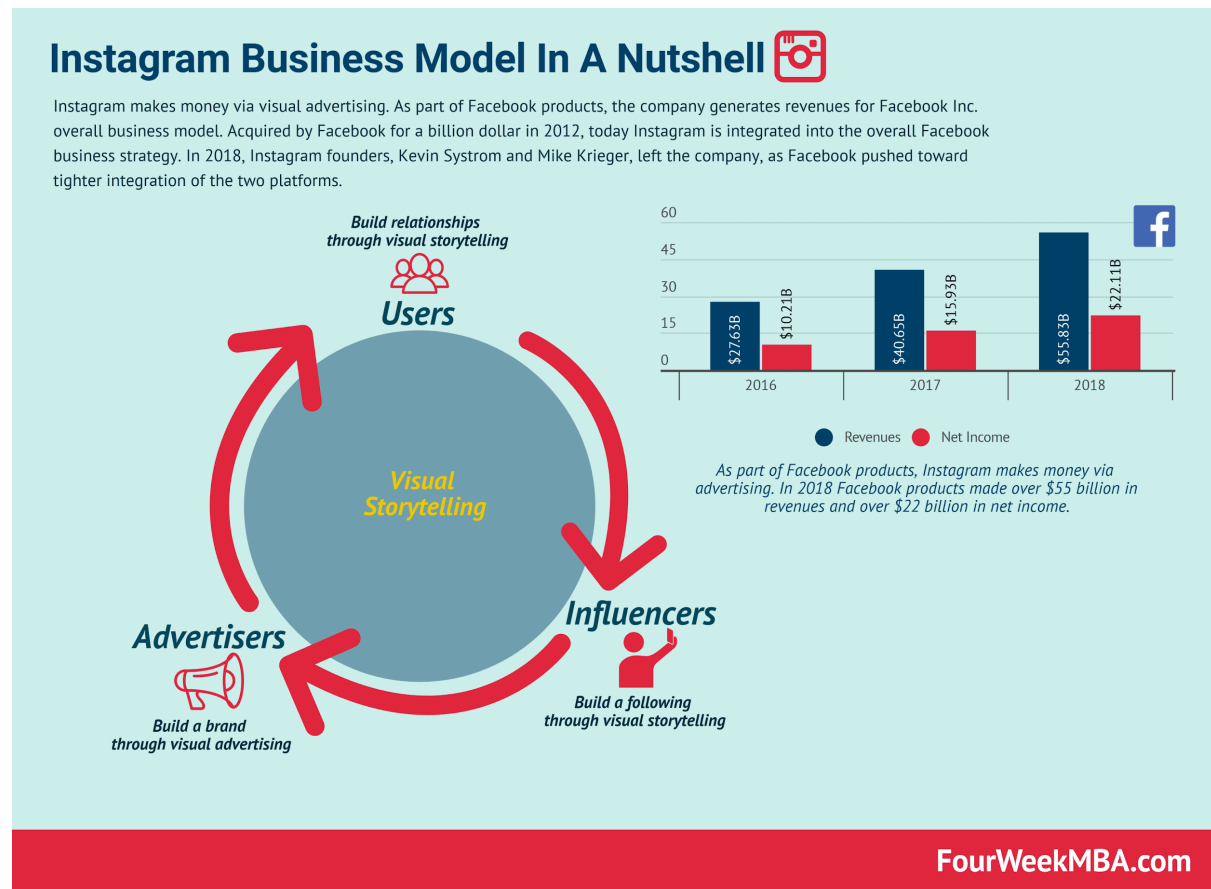


NapoleonCat.

Source: NapoleonCat.com

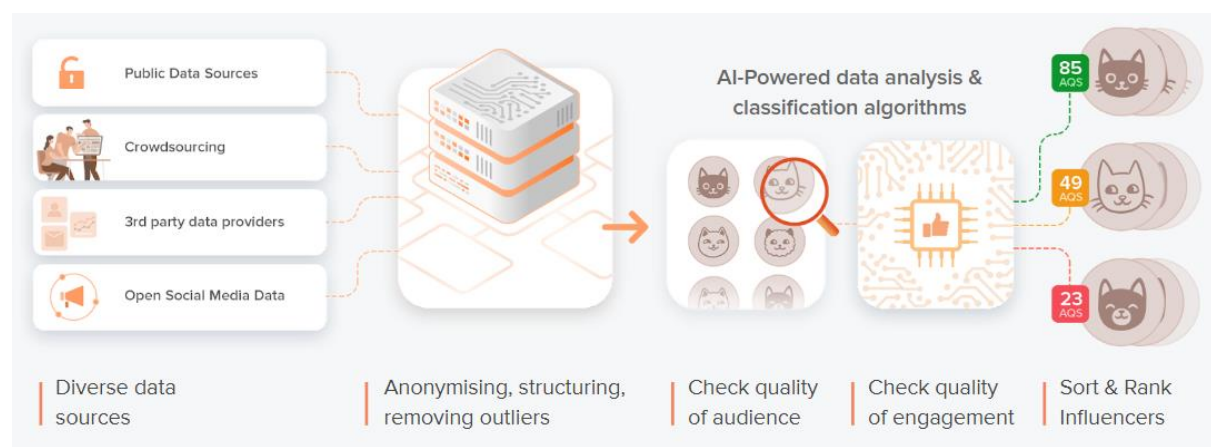
7. Instagram business model

<https://fourweekmba.com/instagram-business-model/>



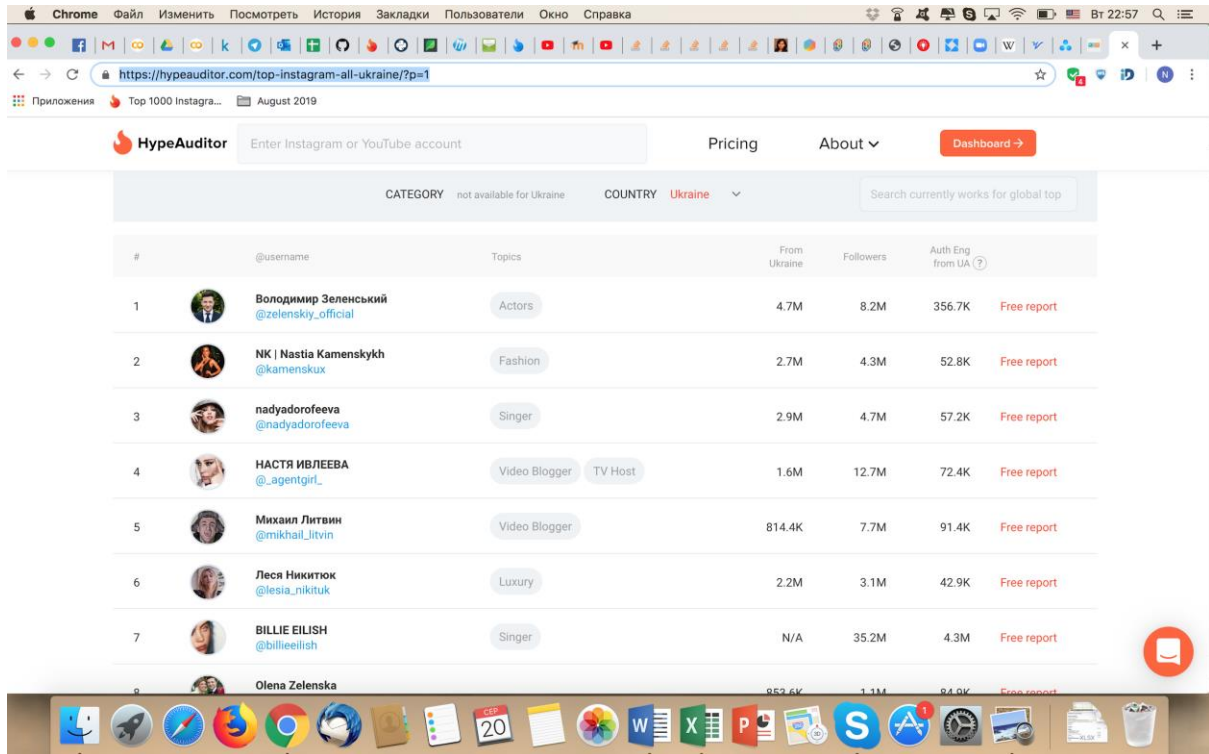
8. HypeAuditor data solution

<https://help.hypeauditor.com/en/articles/2221718-where-does-the-data-come-from-and-how-accurate-are-our-reports>



9. HypeAuditor – list of top 1000 accounts in Ukraine

<https://hypeauditor.com/top-instagram-all-ukraine/?p=1>

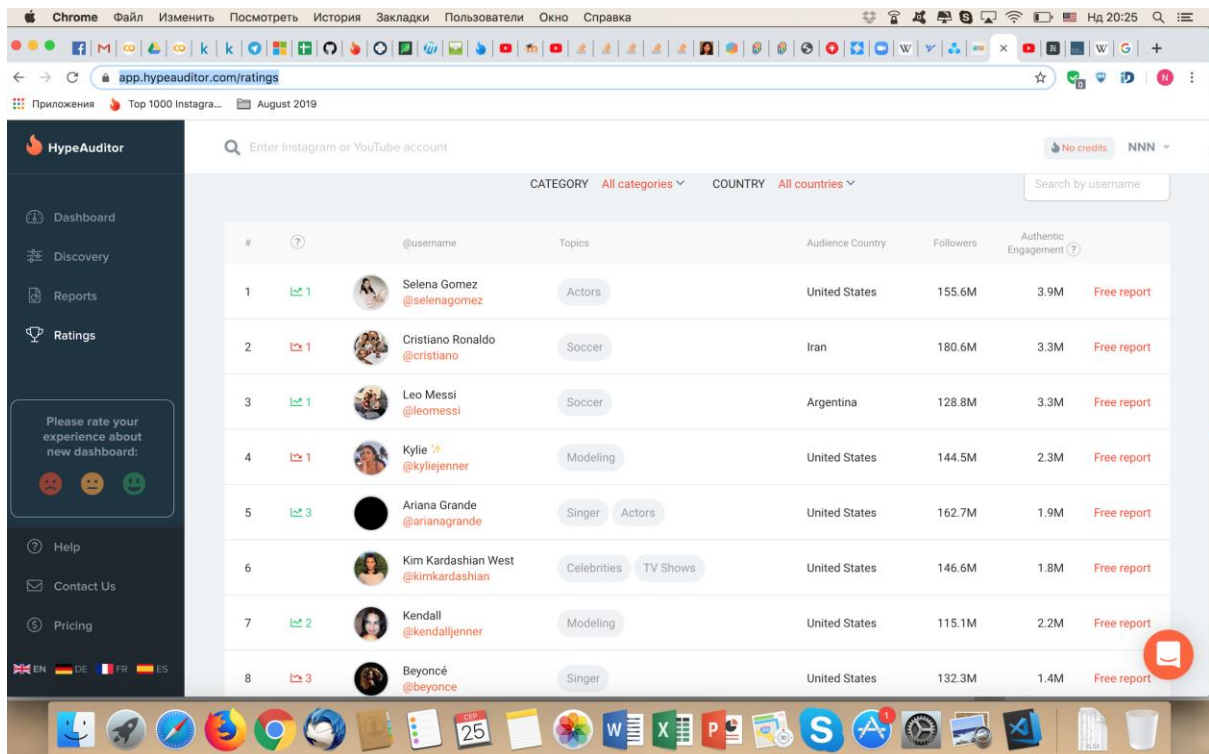


The screenshot shows the HypeAuditor website interface. At the top, there's a navigation bar with 'HypeAuditor' logo, a search bar, and links for 'Pricing' and 'About'. Below this, a filter bar shows 'CATEGORY' as 'not available for Ukraine' and 'COUNTRY' as 'Ukraine'. A table lists the top 10 accounts. The table has columns for rank, username, topics, followers from Ukraine, total followers, authentic engagement, and a 'Free report' link. The accounts listed are: 1. Володимир Зеленський (@zelensky_official), 2. NK | Nastia Kamenskykh (@kamenskux), 3. nadyadorofeeva (@nadyadorofeeva), 4. НАСТЯ ИВЛЕЕВА (@_agentgirl_), 5. Михаил Литвин (@mikhail_litvin), 6. Леся Никитюк (@lesia_nikituk), 7. BILLIE EILISH (@billieeilish), 8. Olena Zelenska (@olenzelenska), 9. [Account with 852.6K followers], 10. [Account with 1.1M followers].

#	@username	Topics	From Ukraine	Followers	Auth Eng from UA	Free report
1	Володимир Зеленський @zelensky_official	Actors	4.7M	8.2M	356.7K	Free report
2	NK Nastia Kamenskykh @kamenskux	Fashion	2.7M	4.3M	52.8K	Free report
3	nadyadorofeeva @nadyadorofeeva	Singer	2.9M	4.7M	57.2K	Free report
4	НАСТЯ ИВЛЕЕВА @_agentgirl_	Video Blogger, TV Host	1.6M	12.7M	72.4K	Free report
5	Михаил Литвин @mikhail_litvin	Video Blogger	814.4K	7.7M	91.4K	Free report
6	Леся Никитюк @lesia_nikituk	Luxury	2.2M	3.1M	42.9K	Free report
7	BILLIE EILISH @billieeilish	Singer	N/A	35.2M	4.3M	Free report
8	Olena Zelenska		852.6K	1.1M	84.0K	Free report

10. HypeAuditor – Instagram accounts in the world

<https://app.hypeauditor.com/ratings>

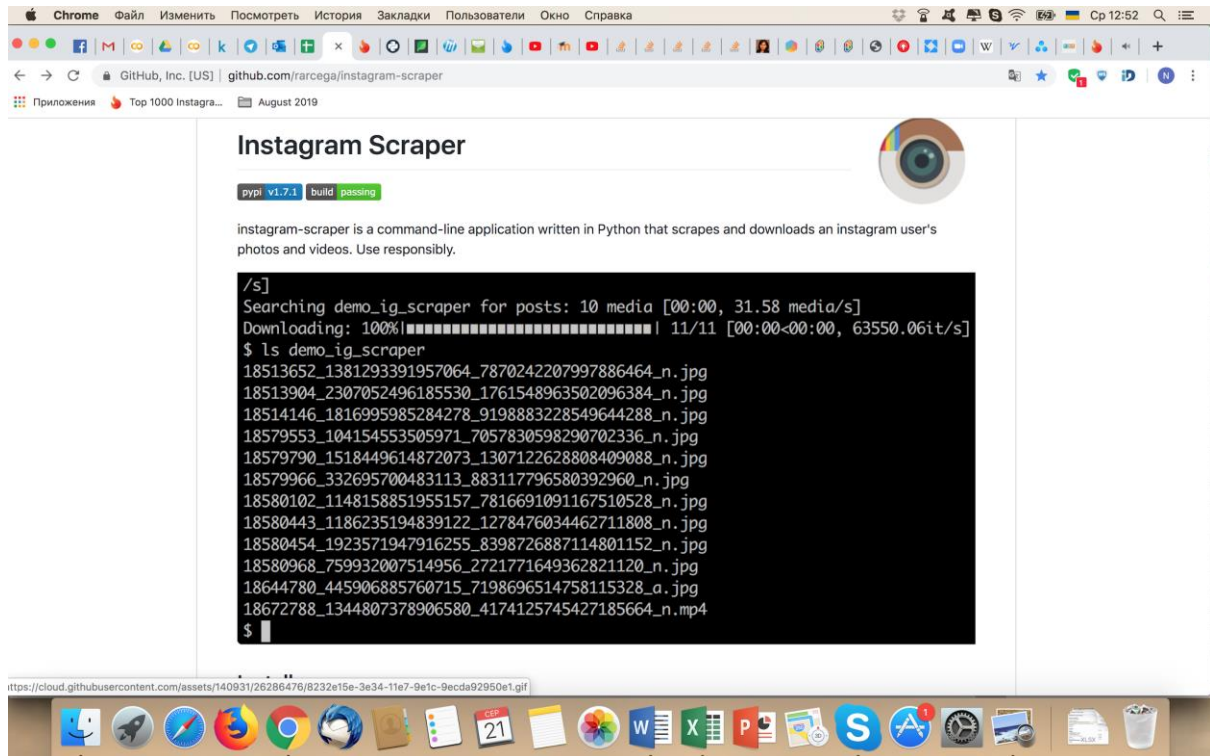


The screenshot shows the HypeAuditor app interface. On the left is a sidebar with 'Dashboard', 'Discovery', 'Reports', 'Ratings', 'Help', 'Contact Us', and 'Pricing'. The main area shows a table of top accounts. The table has columns for rank, username, topics, audience country, followers, authentic engagement, and a 'Free report' link. The accounts listed are: 1. Selena Gomez (@selenagomez), 2. Cristiano Ronaldo (@cristiano), 3. Leo Messi (@leomessi), 4. Kylie Jenner (@kyliejenner), 5. Ariana Grande (@arianagrande), 6. Kim Kardashian West (@kimkardashian), 7. Kendall Jenner (@kendalljenner), 8. Beyoncé (@beyonce).

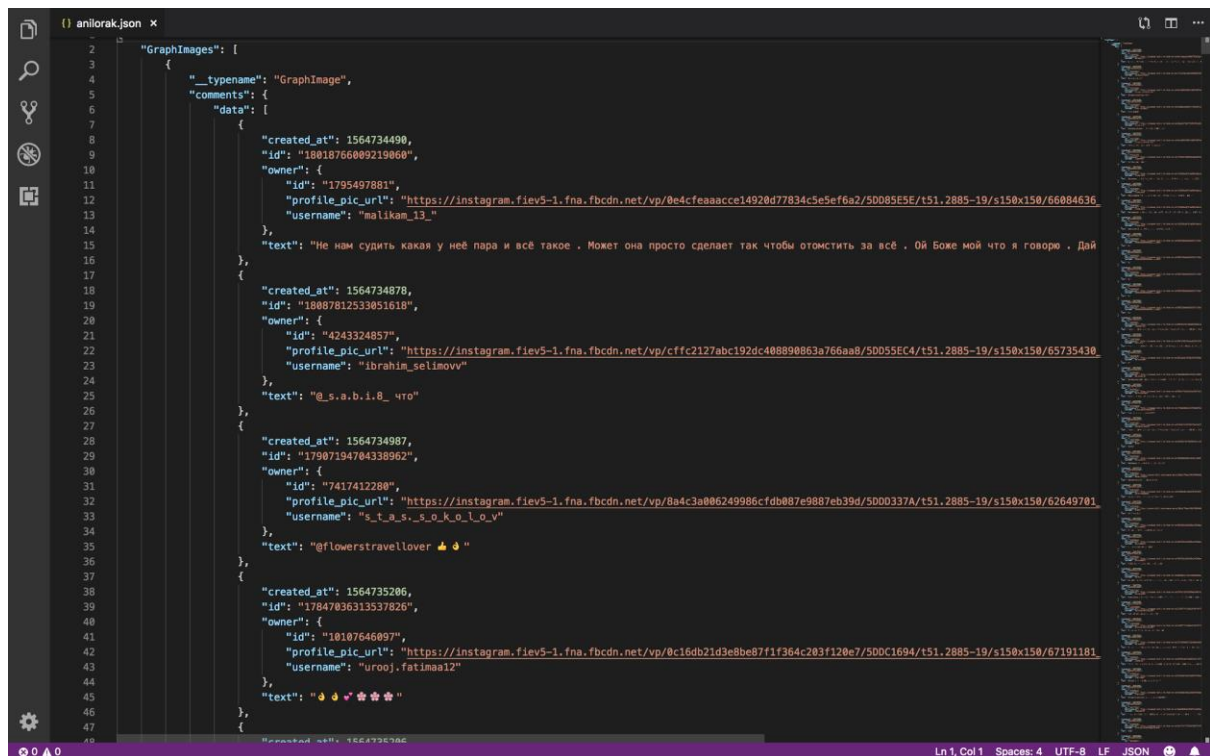
#	@username	Topics	Audience Country	Followers	Authentic Engagement	Free report
1	Selena Gomez @selenagomez	Actors	United States	155.6M	3.9M	Free report
2	Cristiano Ronaldo @cristiano	Soccer	Iran	180.6M	3.3M	Free report
3	Leo Messi @leomessi	Soccer	Argentina	128.8M	3.3M	Free report
4	Kylie Jenner @kyliejenner	Modeling	United States	144.5M	2.3M	Free report
5	Ariana Grande @arianagrande	Singer, Actors	United States	162.7M	1.9M	Free report
6	Kim Kardashian West @kimkardashian	Celebrities, TV Shows	United States	146.6M	1.8M	Free report
7	Kendall Jenner @kendalljenner	Modeling	United States	115.1M	2.2M	Free report
8	Beyoncé @beyonce	Singer	United States	132.3M	1.4M	Free report

11. Instagram-scraper

<https://github.com/rarcega/instagram-scraper>



11. Raw data in json format



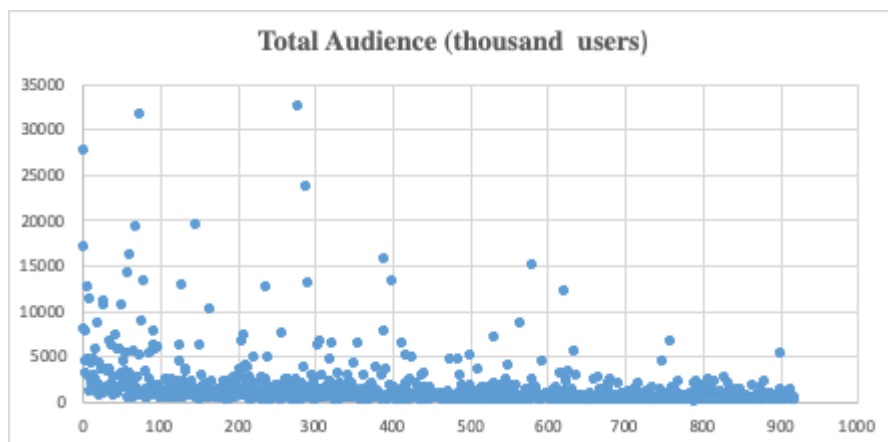
12. Parsed data in json format

```

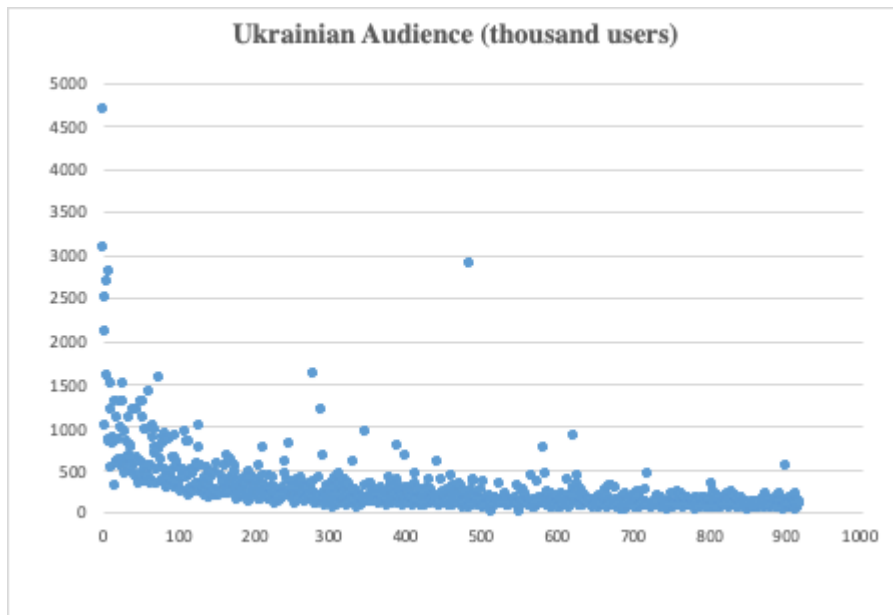
1  {
2    "comments": [
3      {
4        "text": "Не нам судить какая у неё пара и всё такое . Может она просто сделает так чтобы отомстить за всё . Ой Боже мой что я говорю . Дай бог чтобы",
5        "id": 0
6      },
7      {
8        "text": "@_s.a.b.i.8_ что",
9        "id": 1
10     },
11     {
12       "text": "@flowerstravellover 🌸 🌸",
13       "id": 2
14     },
15     {
16       "text": "🌸 🌸 🌸 🌸 🌸 🌸",
17       "id": 3
18     },
19     {
20       "text": "@ibrahim_selimovv ее это человек или нет)))",
21       "id": 4
22     },
23     {
24       "text": "Вы и оно разве вы не видите ??добра вам !",
25       "id": 5
26     },
27     {
28       "text": "Разочарована. Жалко.",
29       "id": 6
30     },
31     {
32       "text": "@elenaspes в смысле? Я вообще не знаю, что у неё в жизни и мне все равно, меня больше моя интересует. Творчество её мне нравится, пусть не",
33       "id": 7
34     },
35     {
36       "text": "@missisbaby16 придет, обязательно схожу. Спасибо за совет. Сколько желчи...",
37       "id": 8
38     },
39     {
40       "text": "@arinakasach её как-то много стало. Раньше, каждую песню хдбшь, а сейчас все больше штампуются...",
41       "id": 9
42     },
43     {
44       "text": "@polischuk.91 но, видимо, не всем ЛЮДИМ он нравится",
45       "id": 10
46     },
47   ]
48 }

```

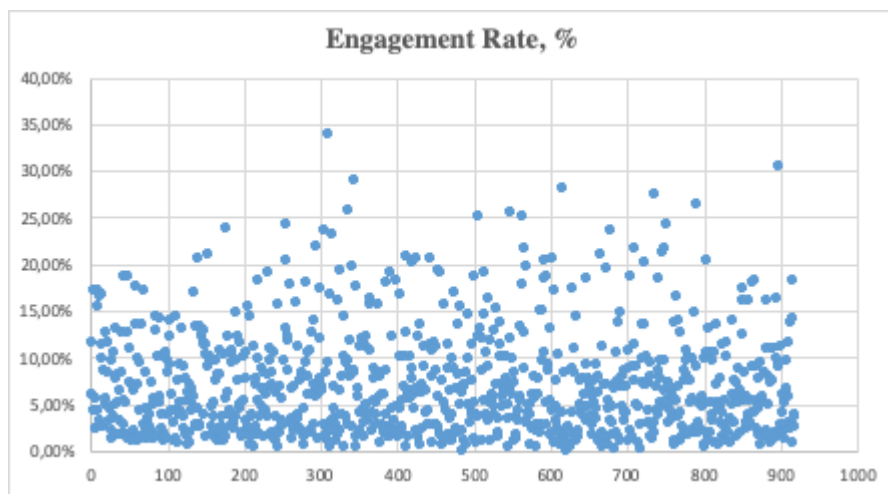
13. EDA Visualization – total audience of the top 1000 Instagram accounts in Ukraine



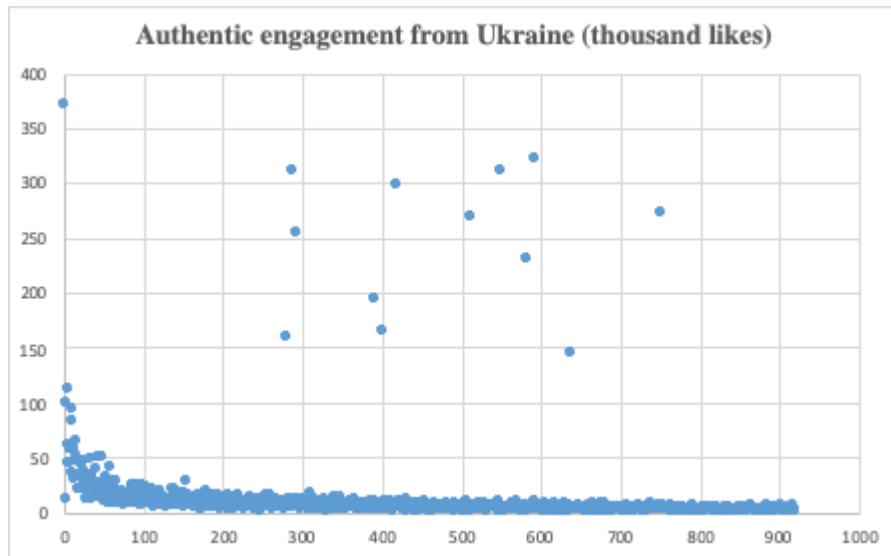
14. EDA Visualization – audience from Ukraine of the top 1000 Instagram accounts in Ukraine



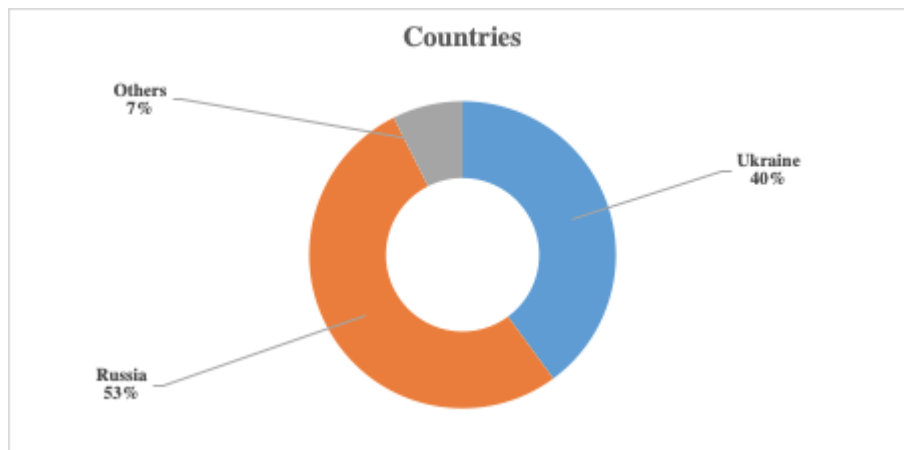
15. EDA Visualization – engagement rates of the top 1000 Instagram accounts in Ukraine



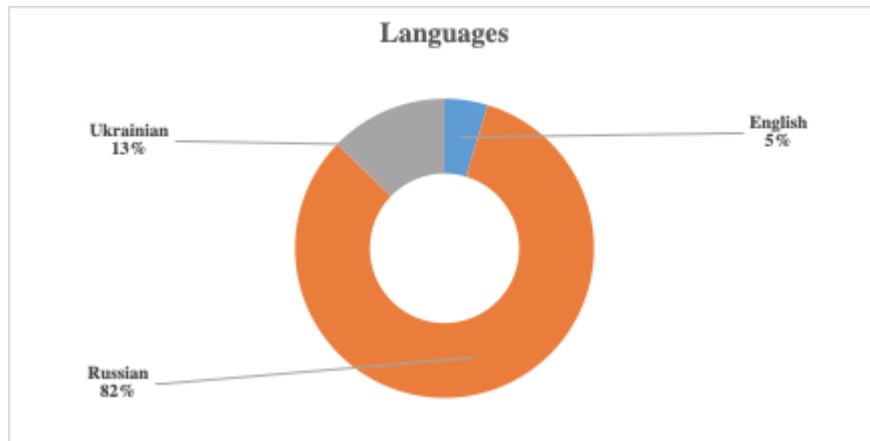
16. EDA Visualization – authentic engagement from Ukraine of the top 1000 Instagram accounts in Ukraine (per post)



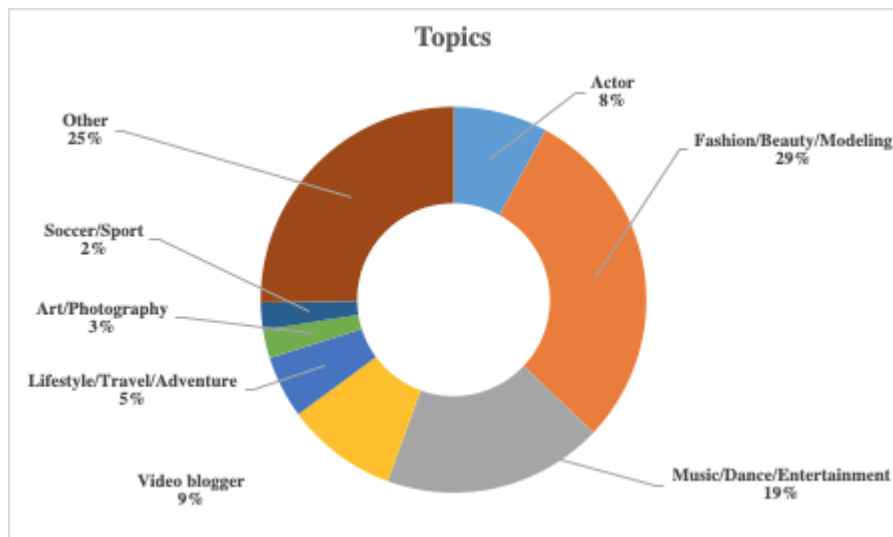
17. EDA Visualization – the countries where the top 1000 Instagram accounts in Ukraine come from



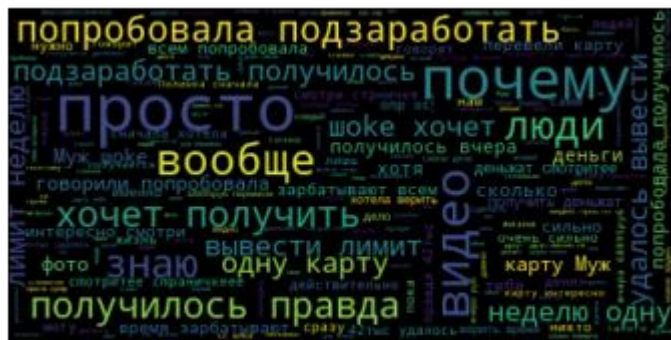
18. EDA Visualization – the languages which the top 1000 Instagram accounts in Ukraine speak to their followers



19. EDA Visualization – the topics of the top 1000 Instagram accounts in Ukraine



20. Word cloud – negative comments



21. Word cloud – neutral comments

7.6. List of abbreviations used

AI - artificial intelligence
API - an application program interface
AWS - Amazon Web Services
B2B - Business to Business
B2C - Business to Customer
CAC - Customer Acquisition Cost
CapEx - Capital expenditures
CEO - Chief Executive Officer
CFO - Chief Financial Officer
CIS - Commonwealth of Independent States
CMO - Chief Marketing Officer
COGS - cost of goods sold
CPA - Cost per action (acquisition)
CTO - Chief Technical Officer
EDA - exploratory data analysis
IHME - an independent global health research center at the University of Washington
KMIS - Kyiv International Institute of Sociology
LTV - Lifetime Value
MAU - monthly active users
Martech - marketing technologies
OKR - Objectives and Key Results
OpEx - Operating expense
PESTLE - is a mnemonic which in its expanded form denotes P for Political, E for Economic, S for Social, T for Technological, L for Legal and E for Environmental
PO - Product Owner
PoC - Proof of concept
QA - Quality Assurance
SEO - Search Engine Optimization
SMM - Social Media Marketing
SWOT - Strengths, Weaknesses, Opportunities, Threats
WFH - work-from-home

7.7. List of terms used

1. API - stands for application programming interface, a computing interface to a software component or a system, that defines how other components or systems can use it.⁴¹
2. CAC - Customer Acquisition Cost - is the total cost of sales and marketing efforts that are needed to acquire a customer.
3. COVID-19 - CoronaVirus Disease 2019
4. Data mining - is the process of finding anomalies, patterns and correlations within large data sets to predict outcomes.
5. EDA - Exploratory Data Analysis - the critical process of performing initial investigations on data so as to discover patterns, to spot anomalies, to test hypotheses and to check assumptions with the help of summary statistics and graphical representations.⁴²

⁴¹ https://en.wikipedia.org/wiki/Application_programming_interface

⁴² <https://towardsdatascience.com/exploratory-data-analysis-8fc1cb20fd15>

6. Influencer - a user on social media who has established credibility in a specific industry.
7. Influencer Marketing - type of marketing, when a company partners with an influential person in their industry to shape consumer behavior.
8. LTV - stands for Life Time Value, an estimate of the average revenue that a customer will generate throughout their lifespan as a customer.
9. Martech - otherwise known as Marketing Technology, is the term for the software and tech tools marketers leverage to plan, execute, and measure marketing campaigns.⁴³
10. PoC - Proof of concept, is a series of activities to test the design idea or assumption. The main purpose of developing a POC is to demonstrate the functionality and to verify a certain concept or theory that can be achieved in development.
11. Retention rate - retention rate designates the percentage of customers the company has retained over a given time period.
12. Sentiment analysis - is contextual mining of text which identifies and extracts subjective information in source material, and helping a business to understand the social sentiment of their brand, product or service while monitoring online conversations.⁴⁴
13. SEO - stands for Search Engine Optimization, the process of maximizing the number of visitors to a particular website by ensuring that the site appears high on the list of results returned by a search engine.

7.8. List of sources

1. <https://www.quintly.com/blog/instagram-study-2019>
2. <https://martechtoday.com/infographic-marketing-technology-landscape-113956>
3. <https://www.statista.com/statistics/617136/digital-population-worldwide/>
4. <https://www.forbes.com/sites/forbesagencycouncil/2019/08/21/how-artificial-intelligence-is-transforming-digital-marketing/#6777df2221e1>
5. <https://klintmarketing.com/marketing-article/50-ai-growth-hacking-tools/>
6. <https://abovethelaw.com/law2020/the-ethical-implications-of-artificial-intelligence/>
7. <https://www.bbvaopenmind.com/en/economy/global-economy/changing-global-demographics-the-certain-future/>
8. <https://itc.ua/news/ukrainskaya-auditoriya-facebook-vyirosla-na-3-mln-chelovek-za-2018-god-obshhee-kolichestvo-facebook-polzovateley-teper-sostavlyayet-13-mln-infografika/>
9. <https://1-a-b-a.com/blog/685-kakie-socseti-predpochitajut-ukraincy>
10. <https://www.marketingcharts.com/digital-51985>
11. <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>
12. <https://ain.ua/en/2019/09/06/marketing-technologies-in-ukraine/>
13. <https://42.unit.city/martech-guide-2019>
14. <https://retailers.ua/news/tehnologii/8812-ukrainskaya-auditoriya-v-instagram-uvelichilas-na-50-bolshe-vsego-im-polzuyutsya-molodyie-lyudi-v-vozhzaste-ot-18-24-let>
15. <https://www.rhsmith.umd.edu/smithresearch/research/how-social-networks-can-curb-youth-unemployment>
16. <https://prm.ua/ru/skolko-budet-stoit-dollar-kabmin-obnovil-makroprognoz-na-2020-god-iz-za-koronavirusa/>

⁴³ <https://merlinone.com/what-is-martech/>

⁴⁴ <https://towardsdatascience.com/sentiment-analysis-concept-analysis-and-applications-6c94d6f58c17?gi=e445dc335df9>

17. <https://www.jpmorgan.com/global/research/fallout-from-covid19>
18. <https://nypost.com/2020/03/17/advertising-budgets-could-take-a-3b-hit-over-coronavirus/>
19. <https://edition.cnn.com/2020/04/02/economy/recession-how-long-will-it-be/index.html>
20. <https://www.imf.org/en/News/Articles/2020/03/27/pr20114-joint-statement-by-the-chair-of-imfc-and-the-managing-director-of-the-imf>
21. https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide
22. <https://www.epravda.com.ua/publications/2016/12/15/614537/>
23. <https://www.kmu.gov.ua/ua/news/248780511>
24. <https://www.kmu.gov.ua/en/news/nashoyu-nacionalnoyu-ideyeyu-maye-statipobudova-silnoyi-i-uspishnoyi-ukrayini-volodimir-grojsman>
25. https://www.driv.gov.ua/ords/portal/!cm_core.cm_index?option=ext_num_voters&pdt=1&pmn_id=127
26. http://database.ukrcensus.gov.ua/MULT/Dialog/statfile_c.asp
27. <https://vizhub.healthdata.org/le/>
28. <https://nv.ua/ukr/ukraine/politics/vik-osvita-region-hto-i-za-kogo-golosuvav-upershomu-turi-viboriv-prezidenta-ukrajini-50015586.html>
29. <https://nv.ua/ukr/ukraine/events/tebachennya-vs-socmerezhi-zvidki-ukrajinci-berut-informaciyu-i-yakim-dzherelam-doviryayut-50016100.html>
30. <http://m.day.kyiv.ua/uk/article/media/susid-zamist-televizora>
31. <https://www.pewresearch.org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in-the-u-s-as-a-news-source/>
32. <https://medium.com/@MarketMadhouse/baby-boomer-die-off-threatens-trump-and-oprah-c1e3d6fc17ff>
33. <https://nv.ua/ukr/publications/tb-vtrachaje-molodu-auditoriju-i-bere-orijentatsiju-napensioneriv-88674.html>
34. https://datareportal.com/reports/digital-2019-global-digital-overview?utm_source=Reports&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=Dual_Report_Promo_Slide
35. <https://napoleoncat.com/stats/instagram-users-in-ukraine/2019/07>
36. https://plusone.com.ua/insta/en/instagram_in_ukraine.pdf
37. <https://fourweekmba.com/instagram-business-model/>
38. https://en.wikipedia.org/wiki/Internet_celebrity
39. <https://www.webstrategiesinc.com/blog/which-social-media-sites-get-the-most-engagement>
40. <https://hypeauditor.com/top-instagram-all-ukraine/?p=1>
41. <https://github.com/rarcega/instagram-scraper>
42. <https://www.kaggle.com/ziliwang/baseline-upsampling-balanced-softmax-regression/notebook>
43. <https://www.forbes.com/sites/georgedeeb/2014/07/24/is-your-startup-building-a-vitamin-or-a-painkiller/#27e787b83826>
44. <https://hackernoon.com/quantifying-yecs-make-something-people-want-2d07b7762f56>
45. <http://theleanstartup.com/principles>
46. <https://www.youtube.com/watch?v=1bhL8dUQV1M&feature=youtu.be>
47. <https://later.com/blog/instagram-influencers-costs/>
48. <https://github.com/indix/whatthelag>
49. <https://github.com/bureaucratic-labs/dostoevsky>

50. https://github.com/amueller/word_cloud
51. Technical part of the project was implemented in cooperation with Oleksandr Korobov, Max Voitko, Raid Arfua and Artur Miniailyk.
52. <https://morningconsult.com/influencer-report-engaging-gen-z-and-millennials/>
53. <http://www.ukrstat.gov.ua/>
54. <https://www2.deloitte.com/global/en/pages/about-deloitte/articles/millennialsurvey.html>

7.9. List of literature used

1. "Accounting principles: a business perspective, financial accounting" - Hermanson, Edwards and Maher.
2. "Marketing strategy and competitive positioning", 4th edition - Graham Hooley, Nigel F. Piercy, Brigitte Nicoulaud.
3. "Marketing Essentials" - Philip Kotler.
4. "Managerial Economics in a Global Economy" - Dominick Salvatore.
5. "Organizational Behaviour", 15th edition - Stephen P. Robbins, Timothy A. Judge.
6. "The Lean Startup" - Eric Ries

7.10. Notes