Saimaa University of Applied Sciences Faculty of Business Administration Lappeenranta Degree Program in International Business Specialization in Marketing

Elena Milosheska

Public Attitude towards Artificial Intelligence and Data Collection in Digital Marketing

Abstract

Elena Milosheska Public attitude towards Artificial Intelligence and Data collection in Digital Marketing, 47 pages, 3 appendices Saimaa University of Applied Sciences Business Administration, Lappeenranta International Business Marketing Thesis 2019 Instructors: Senior Lecturer Sami Lanu, Saimaa University of Applied Sciences

The purpose of the research was to compare, analyse and evaluate the public opinion towards AI and Data Collection in their online experience and the impact it has on digital marketing. Basic information on Artificial Intelligence and Data Collection is introduced and the correlation with Digital Marketing.

The data for the thesis was mainly gathered from online articles, literature, reports, videos and case studies. The empirical research was executed with a qualitative approach. A survey was created and distributed for each for the specific geographic location. The survey consisted of 14 questions and gathered answers from 213 participants.

The author analyzed and evaluated the public attitude towards personalization of digital experience that is created by personal data collection and AI as well as their attitude towards the personalized advertisements and AdBlock. From the gathered data, the author concluded that the main issues that marketers are facing with public negative view on ads and data will be solved when the consumer takes direct action in what data they share and what benefit they get in exchange. In short, the future is in fair value exchange.

Keywords: digital marketing, data collection, data analytics, artificial intelligence.

Table of Contents

1.		Intro	oduc	ction	5
	1.	1	Bad	ckground	5
	1.	2 Pi	urpo	se of the study	7
	1.	3	Re	search questions	7
	1.	4	Re	search design	8
	1.	5	Del	limitations of the study	9
	1.	6 Lir	nitat	tions	9
	1.	7	Sur	vey	9
	1.	8	Rev	view of sources	10
	1.	9	Stru	ucture of the thesis	11
2		The	oret	ical background	12
	2.	1	Dig	ital marketing	12
		2.1.	1	The 4 Ps of Marketing	13
		2.1.	2	Content and social media marketing	14
		2.1.	3	Search engine marketing	17
		2.1.	4	Advertisements and AdBlock	18
	2.	2	Coi	nsumer behaviour in the digital world	20
	2.	3	Dig	italization	21
	2.	3.1	A	Artificial Intelligence in Digital Marketing	22
	2.	3.2	E	Big Data	24
		2.3.	3	Personal Data	25
	2.	4	Re	gulations	25
3.		Em	pirica	al analysis	
	3.	1	Stru	ucture of the survey	
		3.1.	1	Testing	29
		3.1.	2	Distribution of the survey	30

3.2 Results from the survey: comparison of answers	30
3.2.1 Finland, Russia and Singapore: evaluation of results	30
3.2.2 Key findings	35
3.3 Future research	36
4. Conclusion	38
List of figures	40
List of references	42
Appendices	48

1. Introduction

1.1 Background

The topic of digitalization of society, development of Artificial Intelligence, online privacy and data collection have been one of the most controversial to come in the recent years. With people realizing not only how much data is gathered from each action taken online, but how much value it presents, the public uproar has been rapidly increasing in the recent years.

Additionally, the uprising trend of AI usage for marketing purposes, exactly such as marketing automation, data collection, data analytics, personalization and many more is creating quite a lot of stir in the media. Just recently Google has announced that its capitalizing AI in marketing. This includes machine learning powered ad offering, helping create and run more effective marketing campaigns, ads atomization to user searches, responsive search ads, that are able to identify the best performing ad for certain search inquiry. (Tran 2018.)

One thing from all this controversy surrounding both topics is apparent-people need to understand when to trust intelligent systems and when to do the opposite (King 2018).

The increasing digitalization and changes that have occurred in the online world are the one having most of the impact. The number of smartphone users is forecasted to increase from 2.1 billion in 2016 to around 2.5 billion in 2019. That is around 36 percent of the world's population and for comparison, that number was only 11 percent in 2011. (Statista 2019 a.)

The estimated number of internet users has reached 4.1 Billion, increasing the internet penetration by 42 percent, compared to 18 percent that occurred only in 2010. The number of social media accounts is the one aspect that has faced the most escalation. (Statista 2019 b.)

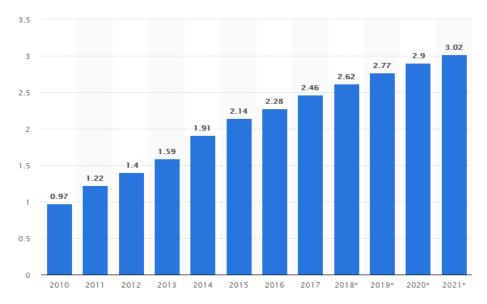


Figure 1. Number of social media users worldwide from 2010 to 2021 (in billions) (Statista 2019 c.)

The jump taking a leap up to 3 Billion accounts in just a decade, global social media and Internet penetration has created a massive online market that has reshaped the marketing and sales fundamentals to drastically new forms. With this rapidly developing numbers, the usage of social media platforms for advertisements has grown so fast in the past decade, the estimated spending annually has reached \$58 billion by 2018. (Molla 2018.)

This has created a massive impact on users and marketers from all around the globe. The massive penetration of advertisements that have taken over the digital world have spiked quite a lot of negative speculations towards marketing as a whole. Simply put, people do not like being bombarded with ads each minute they spend on the Internet. Moreover with the increasing scandals surrounding the topic of personal data being collected and spread, companies not being able to secure personal data of users, aps tacking each step of an individual and even going to an extent to using the microphone and camera of the person without their consent, marketers are facing a fair amount of backlash and complications.

Some 80% of social media users said they were concerned about advertisers and businesses accessing the data they share on social media platforms, and 64% said the government should do more to regulate advertisers...moreover, people struggle to understand the nature and scope of the data collected about them. (Rainie 2018).

This creates a rather complicated situation: companies are striving towards future of auto-generated personal content and advertisement for users, yet average person views that in a negative way.

1.2 Purpose of the study

The research is driven by various purposes, divided into primary and additional ones.

The primary objective of the following study is:

- Analyze and evaluate the influence AI and Data Collection have on Digital Marketing.
- Analyze and evaluate public perception of AI and Data Collection.

Additional objectives are:

- Define the main challenges/problems in digital marketing field.
- Study and evaluate existing cases of AI and Data Collection that have significant impact in the field.
- Study and compare public opinions in different geographical segments.

1.3 Research questions

The main question that is guiding the whole study is:

- Are people willing to give out personal data for the personalization of their digital experience if it is followed by direct benefits?

The following sub-questions are to be considered as they are essential for the study:

- What is the public opinion on personal data being collected for marketing purposes?

- What is the public opinion on AI and their awareness of its presence in their everyday digital experience?
- How do people perceive targeted advertisements?
- How many people block advertisements and the main reasons for doing so?

1.4 Research design

The study is focused on evaluating the public attitude towards the research topic, so it evolved around analyzing people's emotions and feelings, thus why a qualitative methodology is applied.

The research is conducted in two stages. The first stage is gathering and evaluating existing data on the topic, which included media articles, news articles, studying existing examples in the field, company's analysis, books, reports, case studies, videos and public opinion, which is mainly gathered from social media posts and real-life questioning.

Given all of the aspects implied above, the most suitable design for the study is decided to be experimental and survey research. The survey research provides data on trends, attitudes, or opinions of a targeted group of people, while the experimental research evaluates how a specific treatment causes a certain outcome. (Creswell 2018).

The objective is to find the public attitude towards the topic of study and based on the empirical data, compose on a conclusion that will present a compromise in the relationship between marketers, who rely on using personal data for advertising, and consumers, who strive to block those advertisements and collection of personal data. This implies that the best approach is combining deductive and inductive. The deductive side of the study is focused on testing the existing data and theory on the topic, while the inductive is focused on exploring the possibility of generating a new theory or taking a different approach to the already existing one (Saunders 2009).

The empirical data for the research is gathered by an online survey. The data from the survey is gathered in order to trace the similarities and differences

between the answers from the responders in certain geographical area. The survey is conducted in English and Russian languages, as this would generate the maximum amount of responses. The survey is carefully translated in order to present no differences, despite being in different languages in order for the data to be valid and comparable. The research priority is to achieve credible, valuable and reliable research data.

1.5 Delimitations of the study

The study is conducted within set boundaries based on the field of study. First of all, the study is conducted based on marketing theories with an emphasis on digital marketing. The main focus is on consumer behavior and user experience online, perception of AI, data collection and advertisement. The research focuses on analyzing and comparing data from three different geographical segments: Finland, Russia and Singapore. The three markets are chosen based on availability and perceived uniqueness on opinions based on theory. The study is further limited to researching two generation groups: Millennials and Generation Z. This decision is made based on the data of an average online consumer. The paper does not examine the technological aspects of AI and Data Collection, focusing only on the marketing and consumer aspect of the topic.

1.6 Limitations

The study unfortunately had a couple of weak points. First of all, given the fact how quickly the society is changing due to many factors, including the digitalization, the development of digital marketing and trends surrounding the field, the results of the study and the conclusion may be valuable only for a designated period on time. Secondly, the conclusion presented in the study might be too demanding and vague for some companies to apply.

1.7 Survey

Since the main focus of the study is on public attitude and consumer behavior, an online survey with multiple choice and open-ended questions concerning user attitude towards artificial intelligence and data collection online is conducted using Google Forms. There are altogether three surveys created for the three markets used in the research, all consisting of same questions.

To make the survey more available for the Russian users, the survey is translated in the Russian language. Before the survey is distributed, there are several tests done on a small group of people from each of the locations. This is done in order to ensure that the questions are clear to understand, accurate to the topic and correctly formulated.

Once the final version of the survey is created, it is distributed online among users from the three of the locations. The survey results are approached using a qualitative method, focusing on people's attitude and behavior. A full report on the surveys can be seen in Appendix 1,2 and 3.

1.8 Review of sources

Digital data and algorithms facilitate totally new business processes and models. The methods applied range from simple hands-on analytics with small data down to advanced analytics with big data such as AI (Gentsch 2018.)

As previously stated, the research is heavily based on existing theories, literature and online sources. Given the fact that the topics of artificial intelligence in digital marketing, personal data collection and digitalization is rather new, the available academical literature is extremely limited.

Nevertheless, the existing literature provides valuable information as case studies, examples of companies' usage of personal data collection and AI. The online sources provide most of the data on the current situation in the digital marketing field and public attitude towards the topic. The sources used were chosen with a caution, using only reliable articles.

Based on the information provided, the general theoretical framework of the research is created. The main dispute is detected in the public attitude, thus why the research is based focusing on analyzing and evaluation public opinion. The modern problem that has occurred in the field, is that consumers are rapidly losing trust in corporations and marketers.

The hypothesis is that most of consumers do not understand how personal data is collected, how is it being used, to whom it is being shared and why all the above is happening. On top of that, most people are not aware of how this data is used by certain AI to perform tasks, and the idea is certainly alarming to most, based on the media and blog posts seen online.

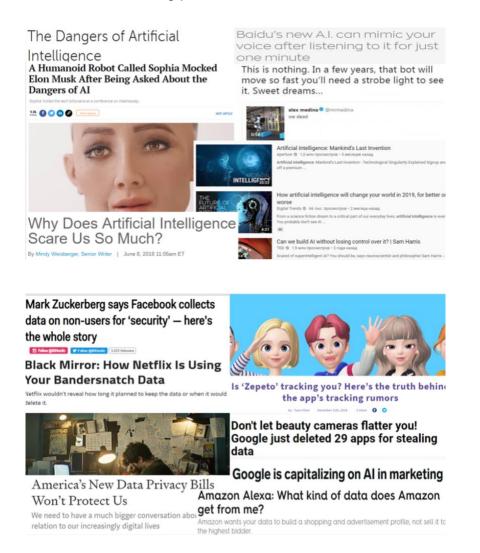


Figure 2 Media Articles on AI and Data Collection

1.9 Structure of the thesis

The thesis is divided into five main chapters, all further segmented into more sub-chapters that discuss more specific on the topic. The «Introduction» chapter will give the reader the overview of the study, arguments as to why this topic is chosen and methods applied in researching. «Theoretical background» will present the general background of the subject to the reader, as the topic of Artificial Intelligence and Data Collection is rather unfamiliar to most people, the chapter will present the data and information there is of people perception on the topic, previous studies, at what state are is AI in Marketing and how it has influenced digital experience of users. Finally, The «Empirical analysis» chapter showcases the research results and analysis of the information gathered, finishing with a «Conclusion» in the next chapter.

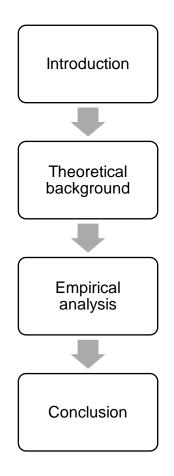


Figure 3 Structure of the thesis

2. Theoretical background

2.1 Digital marketing

Digital marketing encompasses all marketing efforts that use an electronic device or the internet. Businesses use digital channels such as search engines, social media, email, and their websites to connect with current and prospective customers. (Alexander 2019.)

Essentially, all marketing trends are now surrounding the digital market. With the rapidly increasing percentage of people connected to the Internet, the marketing field was presented with almost limitless possibilities of opportunities and it is crucial for businesses to operate online as well. Digital marketing not only has reshaped many existing theories but has created new ones as well. Essentially, the main components of the digital marketing theory are content marketing, social media marketing, search engine marketing, user experience, pay-per-click advertising (PPC).

The way consumer experience and communication has been reshaped, allows not only to create an individual personalized experience but increase the efficiency and effectiveness of the services provided. Companies are provided with an opportunity to spread a marketing campaign globally and with lower costs, using various digital marketing channels, such as social media, websites and email marketing. Using this platform, companies are able to easily spread the marketing message, present their brand and create a direct communication channel with users. (Kingsnorth 2016.)

2.1.1 The 4 Ps of Marketing

In order to gain more insight, it is important to go through one of the main marketing theories- the 4 Ps of marketing- and analyse how it has been applied in digital marketing. The theory is a marketing model, created to achieve the perfect understanding of how to offer something to your customers. The four main components are product, price, place and promotion as explained by Kingsnorth (2016):

Product is considered something that can be physically bought or a service that a company provides. The main goal is to create a product that people desire to pay money for. In digital perspective, this stays the same, but forming more opportunities to create a demand for the product. Online, it is important to keep in mind, that even though the possibilities of promotion are theoretically endless, in reality, the companies must be very analytical as to what methods and channels to use.

- Price is one of the crucial components. While companies can create a high demand for any product possible, the price is the key factor in customer decision. The price must correspond to the product, but this element has a variety of factors that affect the final decision. This includes the brand value, the product quality, the public attitude, the marketing campaign, that from the demand on the product. Online all these aspects come to play as well, on top of few others. Consumer behaviour was certainty changed with the emergence of fast price comparison, cashback, vouchers, discounts. Not only that, but affiliate marketing has created a quite stir in the public as well. With companies being able to promote products and services through third-party websites, there is no place a customer cannot be reached.
- Place is essentially where people go to buy the products or be provided the services they desire. Nothing changes online as well. The main snag is the availability of your online «place». Given that the number of web sites has long exceeded one billion, companies must ensure they are easily to be found. Moreover, the actual place must ensure easy navigation.
- Promotion is everything surrounding the marketing of the product or service, what creates the impression and demand. The main challenge companies are facing digitally, is the competition. Online, one of the most important things is to stand out from the unending stream of information.

With trends changing every day, more people engaging in adblocking, various regulations and social attitudes, digital marketing has created a very challenging environment for successful promotion (Kingsnorth 2016).

2.1.2 Content and social media marketing

Content is what makes you desirable in the eyes of users. And with the amount of content stream people see every day, essentially, a good content is the content that caught the attention of the person and created some sort of impression. According to theory, a good content is credible, shareable, useful, entertaining, interesting, relevant, unique (Kingsnorth 2016). In order to create that kind of content, companies need to understand the nature and preferences of their target customers, the market that they plan to penetrate, the trends and the possible effects of that content on consumer behaviour. With spreading the marketing message not via simple advertisements, but by creating an engaging stream of content, it creates a more interesting experience for people. The vast majority of content marketing can be seen on YouTube. There has been increasing number of brands creating YouTube channels and promoting products or services via videos, often featuring popular influencer. As an example, one of the leading makeup brands worldwide, Fenty Beauty by Rihanna, has created their major demand by constant upload on content on the platform, featuring not only Rihanna herself, but other major influencers. The clear success of this can be seen, as the videos gain over 2 to 6 million views. This portrays an example of relevant and entertaining content that users want to engage in. Not only this creates brand awareness but creates a more seamless promotion as opposed to traditional advertising.

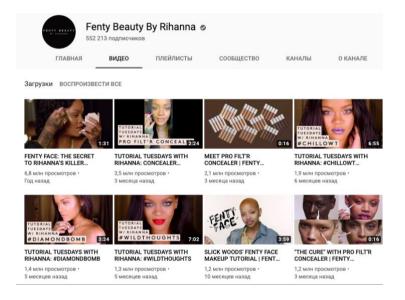


Figure 4 Fenty Beauty by Rihanna YouTube Channel (Fenty Beauty 2019).

But content marketing is not just content created by brands on social media. As another example, the Airbnb websites provides more than just housing opportunities for travelling. The guidebooks provided by the website makes the user immersive themselves in the content provided, as it is essential and relevant for their travelling planning. This kind of content serves for educational purposes, but moreover, it manages to keep the users on the website longer and have their planning attached to one brand. Social media marketing includes creating and sharing content on social media, helping achieve marketing and branding goals. This includes constant activity of the brand on social media platforms, in a form of posts, messages, updates, videos, images, replying to other users and paid advertisements. Overall, everything that creates an engagement with the audience in a direct way, that social media allows (Word Stream 2019). With the rising popularity of personalization, users are often driver to more individual and even «human» experience with brands. Companies are creating social media accounts, not only to post content related to their product and services. Often these platforms are used to the brands to express themselves, just like regular users, creating yet another seamless promotion. As an example, the recent rising popularity in the language learning app Duolingo is all only due to the rising presence and usage of Twitter by the company. Not only that, the app was often associated by the public with constant notifications the users of the application are bombarded with, once they don't open the app for few days, reminding them, they are missing out on the language lessons. This has been a running joke in the community for quite a while, but once the popularity of the application started decreasing, the company found one of the most effective ways in today's modern online market to bring back the attention of users.



Figure 5 Duolingo twitter posts referencing popular memes (Duolingo 2019).

Quite obvious the application has figured that in order to gain the popularity among general social media users, it created this self-aware image surrounding all the popular jokes and memes the public had previously on the app. The efficiency of this rather «childish» method of social media marketing is undoubtful. Just by creating a few social media posts with the same tone of what a regular person would joke about, the app has gained back the popularity back not only in the USA market, but it was recognized globally. (Google trends 2019).

But this is not as easy as it seems. Given the fact, that among many other companies that have tried this method, Duolingo is one of the not many that succeeded and were positively perceived by the public. Often companies overwhelm people with their presence and activity on social media, going over the set marketing guidelines and often going too personal, with expressing opinions on very picky topics.

While people desire to have more seamless and engaging promotions and interaction with companies, they do not wish for the companies to constantly express their political, social, environmental views constantly on their feed and going to the point of offending some groups in a certain way. There's a certain level of ethics that needs to be kept in mind when using social media as a marketing tool.

2.1.3 Search engine marketing

Search engine marketing enables businesses to use search engines as a way to place their paid advertisements on the results pages. When consumers are looking for something certain, there is always a set of key words they enter that then helps the search engine place the most suitable ads as the first results based on what the person searched for. This sort of advertisements is a general way companies use to promote their products and services to the public, and they are very easy to launch. This is one of the most efficient ways of marketing nowadays for multiple reasons. First, it is not too intrusive, as other advertisements tend to be. Second of all, it pays off. People tend to slick on search ads because they correspond to their search needs, they see a familiar brand, are listed higher than the rest of the results or are interesting enough to click. (Marvin 2019.)

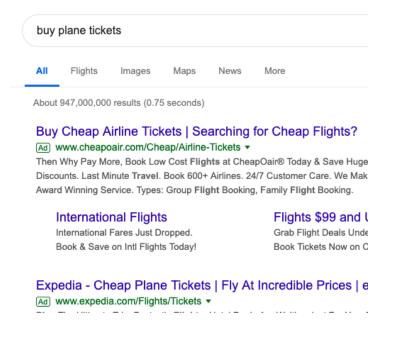


Figure 6 Google paid ads

Compared with the average click-through rate of 1,35% in 2015 and 3,17% in 2018 the increase is clearly seen. (Word Stream 2018).

2.1.4 Advertisements and AdBlock

The modern problem that marketers are facing nowadays is the negative view of advertisements. The general public strives to get rid and block advertisements they see online, and the average click-through-rate has hit the lowest. With the overflow of information and advertisement users get daily from time spent on the Internet, users are being more overwhelmed with the number of products that are being launched in their faces each minute.

The problem that this has created, is that more people are starting to view advertisements from a negative point of view, scrolling quickly past any mention of product being marketed, no matter how personalized the advertisement may be. Simply put, people are tired of being marketed to, thus the usage of AdBlock has become more popular among users, most of them of age 18-24.

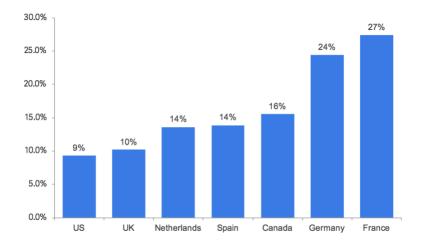


Figure 7 Ad blocking rates by country (unique visitors) (Allen 2015)

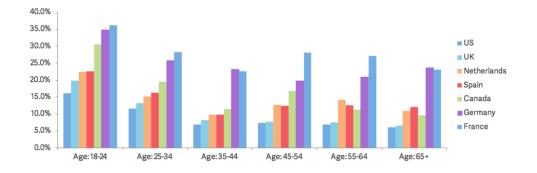


Figure 8 Ad Blocking by age (Allen 2015)

If nothing is done to address ad-blocking, it is projected that it will cost businesses \$75 billion annually by 2020. (Stevens 2018).

Another complication comes with the rising awareness of how much data is gathered from an everyday user. People view it as privacy violation, regardless of the fact, that data collection has been there for years.

Despite seeing the advantages, people are against giving away too much personal information (King 2018). This creates a rather complicated situation: companies are striving towards a future of auto-generated personal content and advertisements for users, yet an average person views that in a negative way.

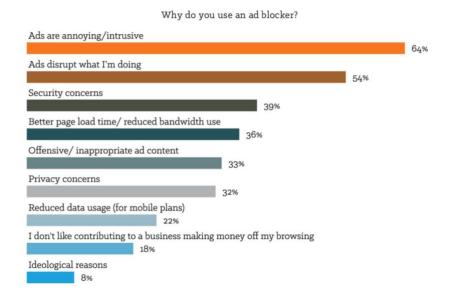


Figure 9 Why do people use adblocker? (HubSpot 2018.)

As seen in Figure 13 above, besides advertisements being deemed annoying and disturbing, one of the most popular options for using an adblocking extension is security and privacy concerns.

2.2 Consumer behaviour in the digital world

From a theoretical viewpoint, the way customers proceed with buying a product hasn't changed that much. The process will always involve the customer having a need, want and preferences they would like to fulfill. What has changed from the digital perceptive is the way customers evaluate the product and the buying process.

The buying process always starts with recognizing a need or want in something, searching for possible solutions, evaluating the options, purchasing the final product (Kotler & Armstrong 2017). Before the technological leap the humanity took, most of the information on products and services was received by a limited resource, mostly TV commercials or tabloids. The search for the product was narrowed as well as the evaluation of that possible product. Most of the customers relied on word of mouth. Nowadays, people are not only presented with an endless stream of online advertisements, the search for the product takes only few clicks. On top of that, people are able to determine whether or

not the product is really worth the price thanks to the hundred's reviews left by other customers. (Kingsnorth 2019.)

All in all, people are now are presented with a faster way to buy. And with the process becoming more efficient and being presented with an enormous variety of products and services globally, people strive to buy more.

2.3 Digitalization

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business. (Garther 2019).

With the giant technological leap, the humanity has taken in the last decade, technology has been applied to every business unit, transforming the possibilities and processes evolving. Nowadays, companies must adapt their businesses to new technologies. Otherwise, they would not be able to keep up with the rapidly rising level competition.

Al based robots are rapidly replacing humans in customer services. In the US market, there are over 100 million users of Amazon Alexa, that have integrated the smart speaker into their everyday life.

Around 64 percent of people state that they use the device for not only smart home functionalities. Alexa has replaced the entertainment role of TV, radio and even laptops for most of the users, as the device have become so interactive, a person can have a full conversation about news, weather, music, sport and even crack a joke. (Tech Crunch 2019.)

This indicates the increasing trend of bots as service in everyday life. Whether in healthcare, finance or shopping, there has been various bots integrated, that perform task that vary from handing queue ticket to giving out full on service on the matter. Specifically, this trend has been rising in the tourism field.

High-end leading companies like Expedia and Qatar Airways have integrated AI to personalize and improve the online customer experience, creating more efficient and seamless process of searching and planning for a flight, not leaving

a comfort of own house. This has reduced check-in time by over 90 percent and is more cost effective compared to traditional counter process. Not only airports, but Hotels have enhanced their customer experience by using AI to develop the booking experience. (King 2018.)

2.3.1 Artificial Intelligence in Digital Marketing

More than half of marketers currently use AI, and an additional 27% are expected to incorporate the technology by 2019 (Tran 2018). If big data is the new oil, analytics is the combustion engine (Gather 2015).

As of 2018, there is a remarkable research interest in this new form of digital marketing processes, which aim to improve attractiveness of content for users via effective digital objects that may be useful on big social media platforms. Al has created caused a colossal upswing in the development of marketing practices in the digital sphere, constituting drastically new processes and models, that change with an immersive speed every day.

Artificial intelligence is the simulation of human intelligence processes by machines, that evolve around the machine learning, reasoning and correcting, with further self-development. With effective and enormous data analysis and the ability to adapt to input, AI is taking over the role of identifying and analyzing marketing trends (Barker 2018). Companies like Amazon, Facebook, Google, LinkedIn and many other websites and social media platforms learned how to integrate AI into their businesses. (Smith 2018).

By using unstructured data to draw conclusions about causes and effects within data, AI can detect and deduce upon patterns, identify opportunities and automatically act upon them. These processes are the same for stages of marketing campaign. Data collection, data evaluation, developing the strategy to act upon based on the data collected and testing the validity and efficiency of the action taken. Artificial Intelligence does the same, only drastically faster and more massive.

These cognitive methods are already being employed to numerous aspects of the marketing, with new applications emerging every day. (Blackmon 2019).

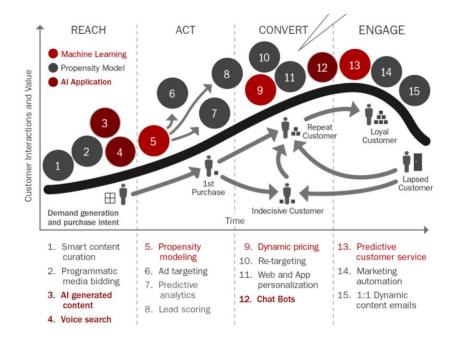


Figure 10 Applications of AI in marketing(Chattey 2018.)

The main improvements AI has brought into Digital Media and Marketing are:

- Personalized user experience- AI collects and analyzes data and can easily predict the user behavior and generate individual experience for customers, helping you understand your target audience.
- Effective Marketing- AI can run marketing campaigns through algorithms to enable much faster and more thorough testing, and identify the possible success of the campaign, and generate a much more effective strategy.
- Cost reduction and higher ROI- With the faster decision making and better content creation, AI digital marketing strategies helps you reach your segmented customer more effectively.
- Sales forecasting- With AI predictive analysis it became much easier to predict the future market trends and be quicker in implementing them. (Talari 2018.)

Despite the fact that AI integration in marketing is still new, the development its facing is undoubtedly very high. Businesses are striving to integrate these solutions into their operations but are still in the process of figuring out the nature of AI. Nevertheless, it is clear, that AI is slowly taking over. According to a survey conducted by BrightEdge, Inc., the biggest trends in marketing are considered personalization, artificial intelligence and voice search. These three trends heavily relate to the application of artificial intelligence and machine learning. (Marous 2018.)

2.3.2 Big Data

Big data" refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze (Manyika 2011). The phenomenon of big data is not new, having existed for years before the vast upsurge of the Internet and Social Media struck. As previously stated, all business processes evolve around gathering and analyzing various amount of data and creating solutions based on the results. The value a data presents is not determined by the amount of data that has been collected, but by the analysis that is conducted on it. Only after its transformed into valuable assent that can be monetized. To define the main features of big data, four Vs are used:

- Volume- defines the amount of data collected, stored and analyzed.
- Velocity- defines how much data is gathered in a defined amount of time, and the speed of which that data is processed and analyzed.
- Variety- defines the variety of how much data collected is structured and unstructured, which makes up to 85% of the collected data, specially from social media, where data usually consists of continues texts, images, videos.
- Veracity- defines the challenge of how much data is worth analyzing, the trustworthiness and value it presents, the amount that should be analyzed and the amount that should be ignored. (Gentsch 2018.)

Without doubt, the amount of data has increased drastically with the rise of online users, the development of data analytics solutions, including AI, that can be even applied to analyze and arrange unstructured data is crucial. There is no possibility for humans to analyze 70 trillion data points available on the Internet, but with AI, there is no such thing as data overload. Given the fact, that the Big Data market worth is estimated to grow from \$35 billion up to \$103 billion

by 2027, analytics and Big Data have fundamentally changed business practices in their sales and marketing functions. (Columbus 2018.)

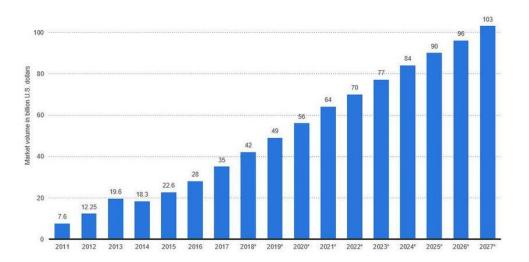


Figure 11 Big Data Market Size Revenue Forecast Worldwide (Statista 2019 d.)

2.3.3 Personal Data

Article4(1) defines personal data as – any information relating to an identified person; an identifiable person is one who can be identified, directly or indirectly...a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. (Privacy Regulation 2019).

In short, personal data is considered all information that can be directly linked to a particular individual. This is the essential foundation for marketers. The data of an individual is an asset presenting a value that could be monetized. Briefly explained, this process takes only few steps. All of user digital activities leave a trail behind them. That is the data of all the actions taken on a particular site, on the search bar, on the picture that they liked, on the product they purchased. This is all valuable information of a person preferences.

2.4 Regulations

Some 80% of social media users said they were concerned about advertisers and businesses accessing the data they share on social media platforms, and 64% said the government should do more to regulate advertisers...moreover, people struggle to understand the nature and scope of the data collected about them. (Rainie 2018). There has been a rising awareness of data privacy and media exposing scandals surrounding the risk of exposing data among the public. No matter how transparent companies try to be with data collection, the news surrounding the topic speak volumes. A simple google search with key words «Facebook» and «Data privacy» immediately gives out three articles that present a controversial information on the topic.

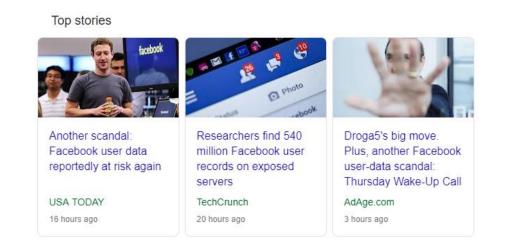
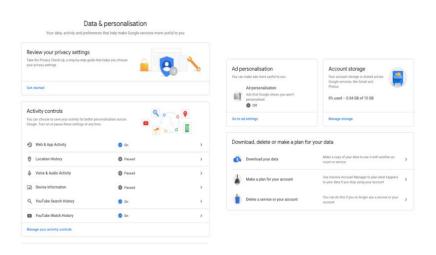
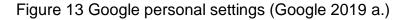


Figure 12 Media articles on Facebook

On May 25, 2018 the European Union presented GDPR- General Data Protection Requirements. This is a new set of standards created for bigger protection of personal data. It covers the trade of data outside the EU zone. The main idea of the regulation is to give the users the power over their personal data and how it is used and spread back. (Lohrmann 2018.) This regulation is quickly reshaping the way companies use data in their operations now, particularly in marketing. More specifically, there are 3 main aspects to take a look at, when it comes to the impact GDPR is going to have on marketing. A huge strike was received by email marketing. The new data permission law requires the companies to firstly receive a direct consent from a person for their contacts to be used for promotional materials. The second aspect to comply to is data access. It is directly marketers' responsibility to ensure that the person can access any data collected and remove the consent for collecting it. With this regulation, companies will need to achieve the upmost transparency with their actions evolving data collection. Last but not least, the marketers will have to adopt data focus. This means that the data collected on a person needs to be justified as to why and for what purposes it was collected (MacDonald 2019). Good example of these processes already adopted is Google. Despite being a website that actually collects the most personal data than any other services, they have achieved maximal transparency with every action they take concerning the data. Being the connoisseur of digital innovation, using AI as their main solutions for data analytics and personalization, Google ensured to give out their users full permission as to what kind of data the user wishes to chare, how that data can be used, whenever they wish to have personalized advertisements, what activity can be tracked and many other features. As a user a person is also able to download all the data that Google has stored.





We will respect the choices you make to limit sharing or visibility settings in your Google Account. (Google 2019 b.)

Now, based on the fact, that AI is quickly becoming one of the most popular solutions for data analytics, it is apparent that it is going to face massive regulations in the near future. Discussions surrounding the topic boil down to extent of how much AI should be developed and what would the possible consequences be, given the fact, that AI is self-learning and in theory the possibilities of the extent that it can self-progress are endless. As ambiguous as

this is sounding, it is apparent, that this is a serious matter, when such respected experts like Stephen Hawking, Jeff Bezos and Elon Musk, have stated their concerns on the topic.

3. Empirical analysis

3.1 Structure of the survey

The sequence of the questions was structured in a form of first presenting the responded with the topic of the research, trying to evaluate the percentage of the respondents that considered to have general to expert knowledge on data collection and Artificial Intelligence. Such type of questions were asked first in order to compare the results with questions that came later, regarding the personalization of respondents feed, targeted advertisements and usage of AdBlock. This method was applied based on the results that came from the literature review, which implied how people are little to none aware on how personal data and artificial intelligence actually work. In addition to this, it was decided to include a question, presenting the participant with four websites and ask which of the four they feel most comfortable sharing their information with. The four websites were chosen based on the fact, that data collection and AI lay heavily in the fundamentals of their operations, as well as these websites have been known to be included in a lot of controversy surrounding the topics. Additionally, the participants were given a chance to display a distrust in all the above websites and write their own option. Thus why, the goal was not only to confirm that assumption, analyze the attitude and trust on the topics, but as well as to better evaluate the results, that came from the main question of the survey, which also was the main research question. «Would you willingly share your personal information if it came with benefits? » was the main priority in the research. This question was created considering several aspects. The hypothesis was, that if the person is taking a direct action in the personal data, they share knowing that they are going to receive direct benefits, they are going to become more comfortable with sharing the said data. This creates a fair value exchange where the consumers take a direct action. Based on the respond of an individual, the responded was given choice to write the kind of benefits they would like to receive, if their answer was positive in the previous one. This question was crucial in order to analyze and compare the preferences of respondents, based on the assumption, that the answers will vary from different geographical locations, but from same generation groups. The same attitude was taken in the last part of the survey consisted of the questions regarding attitude towards personalization and advertisements. In this segment, the author wanted to analyze the percentage of respondents that would portray their negative feelings towards the topics, precisely advertisements in order to compare them to the results in the question, that asked what it takes for an ad to catch the attention of the person. First option in this question was «the ad must be something I am interested about». This was structured in a way, to see compare respondents who portrayed negative feelings towards personalization and ad would with the most amount that was chosen was the first option. Finally, the last question was concerning the usage of AdBlock. The rising popularity of AdBlock among younger generations has been already studied, but for this research the main aim was to again evaluate the possible difference in response, and does it vary based on location. It was decided that in order to achieve efficient and accurate results from three of the locations, three separate surveys were created. Three of the surveys had no differences in any of the questions. Further, it was decided, that the survey aimed for Russian participants was translated to Russian language, to assist in better understanding of the survey aim and purpose and gather higher amount of answers. The survey was translated carefully, making sure, that no question changes the meaning due to translation.

3.1.1 Testing

Before the distribution the survey, several testing's on small groups of people from three of the locations were held. The testing was arranged mainly to detect any mistakes in the question phrasing. The questions aimed to be clear and short, to ensure that the survey would not take more than few minutes to answer. Most important aspect of the survey was to gather as much of public personal opinion; therefore, the questions were absent of the biased words, that would confuse or lead the participant.

29

3.1.2 Distribution of the survey

The survey was distributed online through social media platforms Facebook, Vkontatke and Instagram. The three of the surveys were open to participate for a week. Since the survey was available for everyone to participate in, all the answers gathered from people outside of the age of the target group for the research are not included in evaluation of the results.

3.2 Results from the survey: comparison of answers

As previously stated, the initial hypothesis for the research was that most of consumers do not understand how personal data is collected, how is it being used, to whom it is being shared and why all the above is happening. People are tended to fear what is unknown, especially if it involves a process, they take no action in but give out valuable asset for it to happen in exchange for nothing significant.

The main goal for the research was to find whenever people would become more comfortable giving out their personal data if it came with direct benefits. In addition, it was important to determine what kind of benefits people wish to receive and do they understand the extent of what they can receive.

3.2.1 Finland, Russia and Singapore: evaluation of results

In this section the results from three of the surveys are compared. Full report on the results can be seen in the Appendix 1,2 and 3. Firstly, as the study was delaminated only to Millennials and Generations Z, most of the participants fit in to the age group of 16-25-year-old. An error occurred in the Russian survey, gathering few answers from participants on older generations, thus for the accuracy of the study, those answers were not included in the final evaluation of the research.

Based on the results from the second and third questions, three of the groups considered mostly have a basic knowledge on the topic of AI and data collection. It should be noted, that in Russia, the percentage of people who considered themselves to be experts in data collection is drastically bigger than in the rest of the groups. The questions concerning the level of comfort person displays of

data being collected and shared have showed very similar results as well, showcasing that people from three of the location feel mostly slight to extreme discomfort. It must be stated, that results from Finland showed the least level of comfort, similar in the next question, concerning the level of comfort people feel by AI using their data to perform tasks. Other than that, the answers were quite similar from three of the groups.

An interesting result emerged in with the next question. The most trusted website for three of the groups occurred to be Google.

	Finland	Russia	Singapore
Google	43.1%	51%	38.5%
Facebook	21.6%	6.7%	0%
Amazon	3.9%	7.4%	0%
Instagram	35.3%	19.5%	30.8%
None of the above	37.3%	40.3%	30.8%

Table 1 Question 6 *«Which of these websites do you trust sharing information with»* results

The second similar answer was «none of the above». The differences came in with the other options, specifically Facebook. While in Finland, Facebook have been selected as the third most trusted website, in Russia in was the least popular option. The surprise came in with Singapore, where none of the participants chose Facebook as an option.

This question carries big value to the research. As stated previously, one of the goals for the study, was to evaluate how many people actually understand the nature of data collection and AI. And when going back to the results and finding out that Instagram is the second most trusted website among all the three

location, quite an irony occurs, given the fact, that Instagram is owned by Facebook. Additionally, the option Amazon was the one of the least popular, gaining again no attention from Singapore, little from Finland and slightly more in Russia. It is important to state the significance of this particular result. The main complication in the field nowadays and as it can be seen in the results, is that people are not willing to give out their information most of the time and have little trust in the process, since most of the time, it creates no meaningful benefit in return or is surrounded by controversies.

The decision to put Amazon in the list of these four websites was made based on the fact, that on platforms like Amazon, people strive for personalization, they desire to be presented with products based on their preferences and needs. Amazon is the leader in using a comprehensive collaborative filtering engine (CFE), which analyzes the items the customer has purchased, the wish list they have, the product they have previously reviewed and the most popular search options. The company has integrated analytics for targeted marketing to increase customer satisfaction (Wills 2018). So, to see that among three of the groups this option was the least popular one was intriguing, since websites like Amazon are the one where people receive most of the benefit from the personal data collected.

As regards in the next question, the main question of the research, when asked would they willingly share their personal information if it came with benefits, the results showcased the most difference compared to any other question.

Table 3 describes the results that came from Finland and Singapore, which were the most surprising.

	Finland	Russia	Singapore
Yes	11.8%	25.7%	15.4%
Νο	21.6%	25%	15.4%

Yes, but with little will	9.8%	33.8%	23.1%
Not sure	56.9%	15.5%	46.2%

Table 2 Question 7 « Would you willingly share your personal information if it came with benefits » results

While the it was expected to have more positive results, the participants showcased mostly uncertainty and negativity with the answers. Now, when comparing the answers to the Russian group, the difference is exceptional, when most of the participants have answered positive to the question. But the complication in evaluating the results came with the next question, where people were asked to write down the benefits they would like to receive.

Most of the responses from Russia show that people desire to receive money in return. This goes to show that participants from the group have rather vague and narrow perception of the topic. To back this statement, the answers from both Finland and Singapore portray mostly a desire for convenience, in form of goods, services or discounts. Should be added, that money was also rather popular answer, but not as much as with the Russian group. It was interesting to see some answers display a desire for more personalized feed or even targeted advertisements, given the fact that the next two question were concerning that theme.

So that all requests to sites / requests and Google were adjusted to my preferences, interests, scope of activity, the sites and types of information that I prefer were offered first- Question 8 «What kind of benefits would you like to receive» answer from one of the respondents.

As expected, half of the participants showed preference in personalization of their daily feel under their preferences. Curiosity accelerated from the other half. Most of the answers showed uncertainty or negativity towards the topic, which creates a rather confusing evaluation. Since this question is about one of the most convenient features a person can get on the internet, especially social media, where people mostly desire to view content they favour, its rather confusing to see so many reluctances towards the feature, especially in the Finnish group.

	Finland	Russia	Singapore
Yes	49%	56.4%	65.5%
Νο	25.5%	14.8%	23.1%
Not sure	25.5%	28.9%	15.4%

Table 3 Question 9 « *Do you prefer your digital feed being personalized under your preference»* results

Advancing towards the next questions, this were another set structured to catch the correlation between the answers from one question with the ones in the other. Mostly, people have natural attitude towards targeted advertisements, the other half being divided by the ones feeling positive and negative towards the topic. When asked how often an advertisement catches attention of the participants, major part of the participants rarely to never pay attention. Finnish group showed more individuality, by having the most percentage of participants who often pay attention to an online ad.

After the results from these two questions, the most popular answer in the next question, asking what it takes for an add to catch the attention of the person, the most popular result among the three groups was *« the ad must be about something I am interested in »*.

Judging from the sequence of these three questions, it is clear to see, that most of the people have a really uncertain apprehension of personalization. While it is clear that people desire for services to be accommodated under their preferences, there is a certain level of confusion when it comes to specific aspects of their digital experience.

- «So that all requests to sites / requests and Google were adjusted to my preferences, interests, scope of activity, the sites and types of information that I prefer were offered first»
- «Personalized offers in stores / discounts. »
- «Personal benefit (moving information bbetween own social media pages etc). »

The above are some of the answers received from respondents from the three of the locations on the question 8 *«What kind of benefits would you like to receive»*. This are all long-time existing features on almost all online networks, specifically Google.

This goal of the last question goal was to find out and compare the usage of AdBlock based on the three locations. Russia showed the highest rate of people who use the extensions. High perchance of people in Finland and Singapore have stated they don't use the extension, and quite fair amount never even heard of it. What was interesting to find out, that in Singapore, the extension is actually enabled automatically for some users. When asked why people use it, there no surprise that main reason was to get rid of the immense number of advertisements, especially banner ads.

«Without using it, the amount of advertising on the page exceeds all reasonable limits. Advertising should attract attention, not interfere with viewing information».

3.2.2 Key findings

- The opinion towards the topic clearly varies based on the location, but the overall attitude is overall the same.
- People vaguely understand the nature of data collection and AI in the three of the locations.
- Respondents from Finland and Singapore expressed uncertainty towards sharing their personal data in exchange of benefits, while more then 50% of Russian agreed to the idea.
- The most popular idea of benefit is money and discounts.
- Adblocking is most popular in Russia from three of the groups.

- Most of the users appeal to personalization but desire it only in certain aspects of their digital experience.
- Despite the existing and possible benefits, people are still not comfortable with their personal data being collected
- Google and Instagram are the most trusted websites.

3.3 Future research

The future of the research surrounding this topic will still highly focus not only on the human perception and attitude, but the regulations and innovations that are going to be faced in the field. Considering the modern situation and the social, economic and political changes appearing, new laws on the Internet, this are all yet to influence the public and businesses. What is clear, the fair exchange relationship is something that can create a more trusting relationship between companies and consumers, which used the right way, will be in theory almost equally beneficial.

But yet, the complication comes not only with the abstract requirements the public has, but with the companies abilities to fulfil this kind of relationship, as this kind of changes will affect not only big corporations, but small businesses as well. Another big influence comes from the way companies are going to manage data. Only recently with all the scandals surrounding the field, the data collection market was put under regulations, but data collection has only advanced further.

When all of this is put into digital marketing perspective, the future is pointing to rather indecipherable predictions. Clearly, bigger companies are moving more towards seamless stream of content marketing through social media, yet this type of content is still advertised to users via third party, such as Google or Facebook. Smaller companies with way less budget are relying more on presenting customers with more personalized services, striving to achieve the «individual experience». Both are heavily revolving around data collection; the difference is in the opportunities they have with that data. The public on the other hand is striving for a future where less data is being taken, in other words, more privacy and more restrictions on the field. This is all topped off with the

fact, that general public had little to no knowledge to the process they unwillingly became a part of. (Matsakis 2019.)

Looking back at all the information gathered through the research and the results from the study, despite all the involving aspects, the main reason why marketers lost trust of the public is that the public feels robbed, threatened and annoyed on something they have no obvious control over. The distrust has grown so much over the years, when even presented with the option of receiving direct benefit from their personal data, most displayed uncertainty or negativity towards the option, the others demanded monetary compensation, which for now, is too obscure concept to imagine, but still possible in theory. Despite that, as showed in the example earlier and being the most popular choice of trust, Google have created a loyal and trusting attitude from its users, still being a service who collects most amount of data.

With this, it is clear, that the theory of fair exchange between the users and marketers should be practiced further, in order to regain the lost trust of the public.

Given all the above, the list of future research main objectives will focus on:

- 1. The possibility of implementing the fair exchange model with customers and the effects of it in the industry for companies and public.
 - 1.1 The theory of how this model can be used for companies of all sizes and businesses.
 - 1.2 The feasibility of integrating this model: will the public accept it, will it be global, will companies be able to implement it the right way?
- 2. How the field of Data Collection will be further regulated and the affect it will have on businesses of all sizes.
- 3. What regulations and possible restrictions the AI field is going to face, putting the fact, that it is now the main solution companies use for data collection and analytics.
- 4. The effects of this regulations and social changes on digital marketing and how the field will change and developed further.

- 4.1 The possibility of seamless content via social media being the main marketing tool used in the future.
- 4.2 The future of targeted advertisements: how personal will ads become and how comfortable that would make the public feel.
- 5. How will Adblocking advance further.

4. Conclusion

The purpose of this study was to evaluate the public opinion on AI and Data Collection in their digital experience and the impact it has on digital marketing. The hypothesis that the research was based on and started the study was that most people do not understand how personal data is collected, how is it being used, to whom it is being shared and why all the above is happening and what role the infamous AI has in this process. After the evaluation of the answers received by the survey, it can be concluded, that this statement is justified to an extent.

First of all, while most of the users have vague perception of the topic of data collection, it is fair to say, that it was never in their responsibility to be aware on these matters, but the companies that use this type of processes to make it notable. Fairly, after the public realized then that their personal data is being collected, after the receiving the backlash, the public was presented with «Terms and Conditions» which by agreeing to, they give out direct consent. What is quite alluring about this type document, is that for example, Apple «Terms and Conditions» consists of 35 pages and more then 20 thousand words. Does an average person have time to read that on their regular day? The researches in Carnegie Mellon calculated the amount of time it would take an average person to read through all the pages of every policy they encounter on the Internet. The average length of a privacy policy is 2,518 words, which takes approximately 10 minutes to read. A person encounters around 1,462 policies every year. To read each and every policy, it would take 76 work days. Put into national perspective, that is 54 billion hours, which in theory can be \$781 billion in national costs or all work ours lost (Madrigal 2012). The numbers sound already ridiculous and this study was conducted in the year 2008. With how much the Internet and the average user change today, it is guite scary to imagine the changes that occurred. Nevertheless, the result is clear, when the direct responsibility was legally shifted to users to make sure they know what they accept. But since the public is realizing more and more how much profit is generated on personal data with no direct return, it is no surprise there has been a change in attitude and mentality towards things as personalization and marketing.

People strive to be directly included in process of monetization that involve something they own, in this case, their data and not be presented with ambiguous amount of policy pages and advertisements.

Now, when it comes to artificial intelligence, no doubt, despite being an immature field, it has already created a huge advantage in marketing and big data analytics industries. The problem that the research has concluded, is that not only people fail to actually understand the nature of how AI works, but marketers as well. When it comes to public attitude towards this topic, most of the opinion is shaped by the endless stream of media and content portraying AI as something that, directly quoting the famous physicist Stephen Hawking, will *«extremely dangerous»*. And it has its fair share of truth.

"We are putting machines into more and more positions of making decisions. You can't guarantee the particular intelligent system that is engaging in lifelong machine learning in a complex environment that is poorly understood. » (King 2018).

When it comes to the possibilities AI has and the data it can analyze, the possibilities of what it can do with that data once unleashed from any supervision are really in fact endless. This created a certain threat to the industry, relying solely on data collection, that has already faced fair amount of backlash and controversies.

Overall, it is easy to distinguish some main points from the conducted research and available information on the topic: transparency, trust and accountability, as well as creating a mutually beneficial relationship with the users, which are given a real chance to be directly involved.

List of figures

Figure 1 Number of social media users worldwide from 2010 to 2021 (in billion	-
Figure 2 Media Articles on AI and Data Collection	11
Figure 3 Structure of the thesis	12
Figure 4 Fenty Beauty by Rihanna YouTube Channel	15
Figure 5 Duolingo twitter posts referencing popular memes	17
Figure 6 Google paid ads	18
Figure 7 Applications of AI in marketing (Smart Insights 2018)	21
Figure 8 Big Data Market Size Revenue Forecast Worldwide (Statista 2019) 2	23
Figure 9 Media articles on Facebook	24
Figure 10 Google personal settings (Google 2019)	27
Figure 11 Ad blocking rates by country (unique visitors) (Allen, 2015)	19
Figure 12 Ad Blocking by age (Allen, 2015)	19
Figure 13 Why do people use adblocker? (HubSpot 2018)2	28

List of tables

Table 1 Question 6 «Which of these websites do you trust sharing information with» results
Table 2 Question 7 « Would you willingly share your personal information if itcame with benefits» results
Table 3 Question 9 « Do you prefer your digital feed being personalized under your preference» results

List of references

Alexander, L. 2019. HubSpot. What is Digital Marketing. https://blog.hubspot.com/marketing/what-is-digital-marketing. Accessed on 23 of April 2019.

Allen, R.2015. Do You Know the Impact Of Adblockers Today? Smart Insight. Https://Www.Smartinsights.Com/Digital-Marketing-Strategy/Online-Business-Revenue-Models/Do-You-Know-The-Impact-Of-Adblockers-Today/. Accessed On 20 February 2019.

Ai Multiple.2019. Content Automation: A Comprehensive Guide 2019 Update. Https://Blog.Aimultiple.Com/Content-Automation/. Accessed On 25 Of January 2019.

An, M.2016. HubSpot. Why People Block Ads (And What It Means For Marketers And Advertisers). Https://Blog.Hubspot.Com/News-Trends/Why-People-Block-Ads-And-What-It-Means-For-Marketers-And-Advertisers. Accessed On 15 Of February 2019.

Afuah A, Tucci C. 2001. Internet Business Models And Strategies. Text And Cases. Mcgraw-Hill International Editions. Singapore, Singapore.

Blackmon K. 2019. Future Social Media Depend on Artificial Intelligence. Smart Data Collective. Https://Www.Smartdatacollective.Com/Future-Social-Media-Depend-Artificial-Intelligence/. Accessed On 12 January 2019.

Chaffey, D. 2018. Smart Insights. Average Display Advertising Clickthrough Rates. Https://Www.Smartinsights.Com/Internet-Advertising/Internet-Advertising-Analytics/Display-Advertising-Clickthrough-Rates/. Accessed On 15 Of March 2019.

Curran, D. 2018. The Guardian. Are You Ready? Here Is All The Data Facebook And Google Have On You. Https://Www.Theguardian.Com/Commentisfree/2018/Mar/28/All-The-Data-Facebook-Google-Has-On-You-Privacy. Accessed On 20 Of March 2019.

Chaffey D., Smith P. 2013. Emarketing Excellence, Planning And Optimizing Your Digital Marketing. 4th Edition. Routledge. New York, USA.

Columbus, L. 2018. Forbes. 10 Charts That Will Change Your Perspective Of Big Data Growth.Https://Www.Forbes.Com/Sites/Louiscolumbus/2018/05/23/10-Charts-That-Will-Change-Your-Perspective-Of-Big-Datas-Growth/#792f21ed2926. Accessed On 5 Of April 2019.

Data Mining Techniques: For Marketing, Sales, And Customer Relationship Management 3rd Ed. 2011

Fromm J., Garton C. 2013. Marketing To Millennials: Reach The Largest And Most Influential Generation Of Consumers Ever. Amazon. London, United Kingdom.

Facebook. 2019. Everything You Need To Take Ai From Research To Production. Https://Facebook.Ai/Developers. Accessed On 25 Of January 2019.

Google a. 2019. How We Make Money. Https://Howwemakemoney.Withgoogle.Com. Accessed On 30 Of March 2019.

Google b. 2019. My Account. Data And Personalization.Https://Myaccount.Google.Com/Data-And-Personalization. Accessed On 9 Of April 2019.

Google c. 2019. Advancing Ai For Everyone.Https://Ai.Google/. Accessed On 25 Of January 2019.

Gentsch, P. 2018. Ai In Marketing, Sales And Service: How Marketers Without A Data Science Degree Can Use Ai, Big Data And Bots. Kindle Edition

Garther. 2019. IT Glossary. Digitalization.https://www.gartner.com/it-glossary/digitalization/.Accessed on 23 of April 2019.

Hedencrona, S. 2018. Global Webindex. How Data Privacy Is Changing And How Brands Https://Blog.Globalwebindex.Com/Marketing/Data-Privacy/. Accessed On 30 Of March 2019.

Kovacevic A. 2019. Why 2019 Will Bring Debates About Ethics of Artificial Intelligence. Https://Www.Smartdatacollective.Com/Why-2019-Will-Bring-Debates-About-Ethics-Artificial-Intelligence/. Accessed On 12 January 2019.

Kotke U, Sert S. 2016. Intelligent Content Marketing With Artificial Intelligence. Https://Www.Researchgate.Net/Publication/308520444_Intelligent_Content_M arketing_With_Artificial_Intelligence. Accessed On 10 Of January 2019.

King, Katie.2018. Using Artificial Intelligence In Marketing. Kogan Page. Kindle Edition.

Kotler P., Armstrong G. 2017. Principles of marketing, global edition. Pearson education limited. Accessed on 23 of April 2019.

Kingsnorth, S. 2016. Digital Marketing Strategy. An integrated approach to online marketing. Kogan Page.

Kapoor, D. 2018. Single Grain. How Ai Is Shaping The Future Of Content Marketing And Personalization. Https://Www.Singlegrain.Com/Artificial-Intelligence/How-Ai-Is-Shaping-The-Future-Of-Content-Marketing-And-Personalization/. Accessed On 8 Of April 2019. Linkedin.2019. An Introduction To Ai At Linkedin. Https://Engineering.Linkedin.Com/Blog/2018/10/An-Introduction-To-Ai-At-Linkedin. Accessed On 25 Of January 2019.

Lohrmann, D. 2018. Govtech. Gdpr In The Usa: Whats Next? Https://Www.Govtech.Com/Blogs/Lohrmann-On-Cybersecurity/Gdpr-In-The-Usa-Whats-Next.Html. Accessed On 30 Of March 2019.

Molla, R. 2018. Recode. Advertisers Will Spend \$40 Billion More On Internet Ads Than On Tv Ads This Year. Https://Www.Recode.Net/2018/3/26/17163852/Online-Internet-Advertisers-Outspend-Tv-Ads-Advertisers-Social-Video-Mobile-40-Billion-2018. Accessed On 11 Of March 2019.

Macdoland, S. 2019. Super Office. Gdpr For Marketing: The Definitive Guide For 2019. Https://Www.Superoffice.Com/Blog/Gdpr-Marketing/. Accessed On 8 Of April 2019.

Marous, J. 2018. The Financial Brand. 15 Applications For Ai And Machine Learning In Financial Marketing.Https://Thefinancialbrand.Com/71350/Ai-Machine-Learning-Analytics-Marketing-Banking-Trends/. Accessed On 20 Of March 2019.

Marsakis, L. 2019. The Wired. The Wired Guide To Your Personal Data(And Who Is Using It.)https://www.wired.com/story/wired-guide-personal-data-collection/. Accessed on 23 of April 2019.

Madrigal, A. 2012. The Atlantic. Reading The Privacy Policies, You Encounter In A Year Would Take 76 Work Days. Https://Www.Theatlantic.Com/Technology/Archive/2012/03/Reading-The-Privacy-Policies-You-Encounter-In-A-Year-Would-Take-76-Work-Days/253851/. Accessed On 11 Of April 2019.

Manyika, J., Chui, M. Brown, B. 2011. McKinsey Global Institute. Big Data: The next frontier for innovation, competition and productivity. https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/McKins ey%20Digital/Our%20Insights/Big%20data%20The%20next%20frontier%20for %20innovation/MGI_big_data_exec_summary.ashx. Accessed on 5 of April 2019.

Marvin, G. 2019. Search Engine Land. What Makes People Click on Search Ads? https://searchengineland.com/what-makes-people-click-on-search-ads-309959. Accessed on 24 April 2019.

Noiz. 2018.Basics Of Ai And How It Is Used In Digital Advertising.Https://Medium.Com/@Noizchain/Basics-Of-Ai-And-How-Its-Used-In-Digital-Advertising-49208f976a72. Accessed On 15 Of March 2019.

Pradiso, C.2016. The Impact Of Artificial Intelligence On Digital Marketing. 10th Edition.

Proctor, T. 2005. Essentials Of Marketing Research. 4th Edition. Pearson Education Limited. Accessed On 10 Of March 2019.

Privacy Regulation. 2019. Article 4 EU GDPR. http://www.privacyregulation.eu/en/article-4-definitions-GDPR.htm. Accessed on 25 of April 2019.

Raine, L.2018. Americans' Complicated Feelings About Social Media In An Era Of Privacy Concerns. Pew Research Center. Http://Www.Pewresearch.Org/Fact-Tank/2018/03/27/Americans-Complicated-Feelings-About-Social-Media-In-An-Era-Of-Privacy-Concerns/. Accessed On 20 Of February 2019.

Rouse,M. 2007. Search Customer Experience. Personalization.Https://Searchcustomerexperience.Techtarget.Com/Definition/ Personalization. Accessed On 20 Of March 2019.

Shaan R. 2018. History Of Ai. Towards Data Science. Https://Towardsdatascience.Com/History-Of-Ai-484a86fc16ef. Accessed On 12 January 2019.

Barker, S. 2018. Artificial Intelligence in Digital Marketing. https://shanebarker.com/blog/ai-digital-marketing/. Accessed on 25 of April 2019.

Statista a. 2019. Number Of Smartphone Users Worldwide From 2014 To 2020 (In Billions). Https://Www.Statista.Com/Statistics/330695/Number-Of-Smartphone-Users-Worldwide/. Accessed On 1 Of April 2019.

Statista b.2019. Big Data Market Size Revenue Forecast Worldwide. Https://Www.Statista.Com/Statistics/254266/Global-Big-Data-Market-Forecast/. Accessed On 3 Of April 2019.

Statista c. 2019. Ad Blocking Rates By Country (Unique Visitors). Https://Www.Statista.Com/Topics/3201/Ad-Blocking/. Accessed On 3 Of April 2019.

Smith A. 2018. Why the Future Of Social Media Will Depend On Artificial Intelligence. Smart Data Collective. Https://Www.Smartdatacollective.Com/Future-Social-Media-Depend-Artificial-Intelligence/. Accessed On 12 January 2019.

Sterne J. 2017. Artificial Intelligence For Marketing: Practical Applications. Wiley. New Jersey, USA.

Saleh, K. 2018. Inverpcro. How Much Of The World Population Is Online-Statistics And Trends? Https://Www.Invespcro.Com/Blog/World-Population-Online/. Accessed On 3 Of April 2019. Stevens, J. 2018. Hosting Facts. Internet Stats & Facts For 2019. Https://Hostingfacts.Com/Internet-Facts-Stats/. Accessed On 3 Of April 2019.

Slodki, J. 2018. Forbes. Its Our Responsibility As Marketers To Use Consumer Data For Good. Https://Www.Forbes.Com/Sites/Forbesagencycouncil/2018/08/02/Its-Our-Responsibility-As-Marketers-To-Use-Consumer-Data-For-Good/#Bcd7ceb4420a. Accessed On 10 Of April 2019.

Saunders, M., Lewis P., Thornhill A. 2009. Research Methods For Business Students. 5th Edition. Prentice Hall. Charlesworth, A. 2018. Digital Marketing: A Practical Approach. 3rd Edition. Routledge. Taylor & Francis Group. Accessed On 11 Of March 2019

Talari S. 2018.3 Ways Artificial Intelligence Will Change Digital Marketing. Hackermoon.Https://Hackernoon.Com/3-Ways-Artificial-Intelligence-Will-Change-Digital- Marketing-6110b81de481. Accessed On 12 January 2019.

Tran, K.2018. Google Is Capitalizing Ai In Marketing. Business Insider. Https://Www.Businessinsider.Com/Google-Uses-Ai-To-Enhance-Ad-Campaigns-2018-7?R=Us&Ir=T&Ir=T. Accessed On 20 February 2019.

Tedxtalks. 2014.Designing Technology To Restore Privacy. Https://Www.Youtube.Com/Watch?V=F1jpjlcxpfq. Accessed On 15 Of March 2019.

Tedxtalks. 2014.Data Is The New Gold, Who Are The New Thieves?.Https://Www.Youtube.Com/Watch?V=Xnf-Rgigb50. Accessed On 15 Of March 2019.

Tozzi, C. 2017. Syncsort. How Much Is Big Data Worth? A Lot, When Its Quality Data. Https://Blog.Syncsort.Com/2017/03/Big-Data/Quality-Data-Big-Data-Worth/. Accessed On 25 Of March 2019.

Uzialko, A. 2018. Business News Daily. How Businesses Are Collecting Data (And What They Are Doing With It). Https://Www.Businessnewsdaily.Com/10625-Businesses-Collecting-Data.Html. Accessed On 30 Of March 2019.

Wills, J. 2018. Investipedia. 7 Ways Amazon Uses Big Data To Stalk You. Https://Www.Investopedia.Com/Articles/Insights/090716/7-Ways-Amazon-Uses-Big-Data-Stalk-You-Amzn.Asp. Accessed On 5 Of April 2019.

Wagstaff, K. 2012. Time. You'd Need 76 Work Days To Read All Your Privacy Policies Each Year.Http://Techland.Time.Com/2012/03/06/Youd-Need-76-Work-Days-To-Read-All-Your-Privacy-Policies-Each-Year/. Accessed On 11 Of April 2019.

Wagner, K. 2018.Recode. This Is How Facebook Uses Your Data For Ad Targeting. Https://Www.Recode.Net/2018/4/11/17177842/Facebook-Advertising-Ads-Explained-Mark-Zuckerberg. Accessed On 30 Of March 2019.

Word Stream.2019. Average Ctr.Https://Www.Wordstream.Com/Average-Ctr. Accessed On 15 Of March 2019.

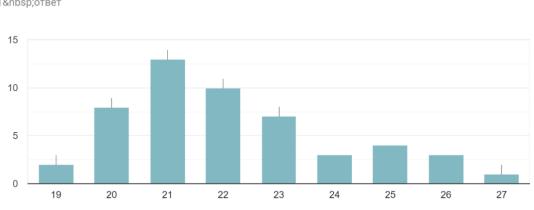
Word Stream. 2019. Social Media Marketing. https://www.wordstream.com/social-media-marketing. Accessed on 23 of April 2019.

Word Stream. 2018. Google Adwords Industry Benchmarks. https://www.wordstream.com/blog/ws/2016/02/29/google-adwords-industrybenchmarks. Accessed on 25 of April 2019.

Yang Y, Siau K. 2018. A Qualitative Research On Marketing And Sales In The Artificial Intelligence Age. Https://Www.Researchgate.Net/Publication/325. Accessed On 10 Of January 2019.

Appendices

Appendix 1. Result of the survey (Finland)

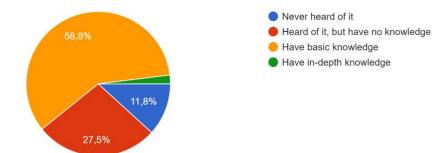


How old are you?

51 ответ

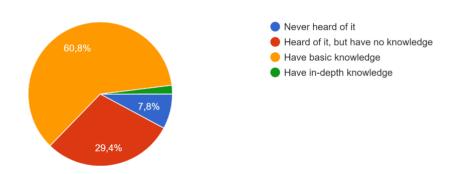
What is your personal knowledge of Artificial Intelligence(AI)? 51 ответ



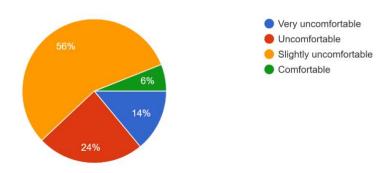


What is your personal knowledge of Data Collection?

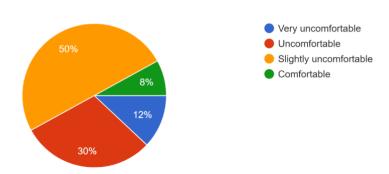
51 ответ



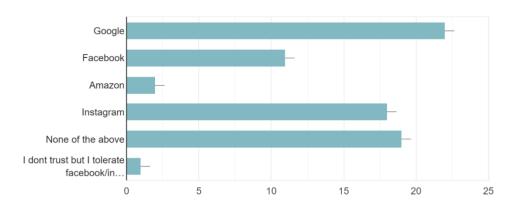
Are you comfortable with your personal data being collected and shared? 50 otbetoB



Are you comfortable with your personal data being used by AI to perform tasks?

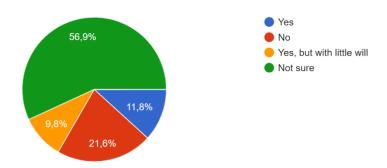


Which of this websites do you trust sharing personal information with? 51 otbet



Would you willingly share your personal information if it came with benefits?

51 ответ



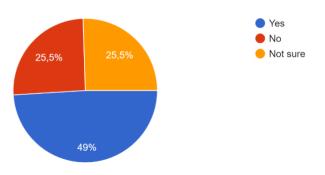
If yes, what kind of benefits would you like to recieve?

13 ответов

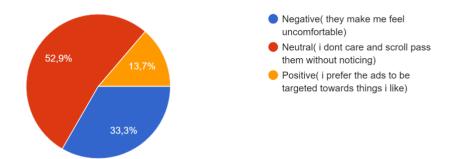
Targeted advertisment	-
Benefits that exceed the down sides. Ofcourse it would be hard to determine risks and harms, that giving up personal information could cause.	
Success, money, goods	
Data being anonymized	
Money, gift cards	
I'm not sure	
x	
personal benefit (moving information vetween own social media pages etc)	
Some kind money for example bying some products from internet	
Added useful features in the software I use, when the data I provide is needed in those features	
Money	
If it helped people instead of corporations using it for marketing	-

Do you prefer your digital feed being personalized under your preferences?

51 ответ

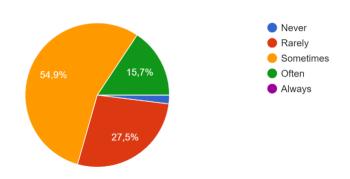


What is your attitude towards ads personalized under your preferences? 51 otbet



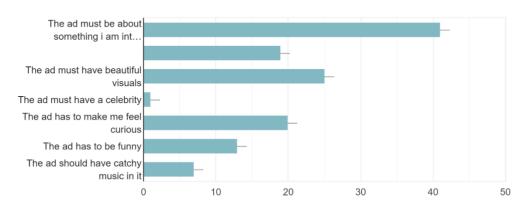
How often does an online ad catch your attention?

51 ответ



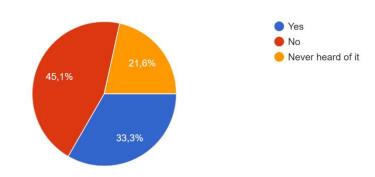
What does it take for an ad to catch your attention?

51 ответ



Do you use AdBlock?

51 ответ

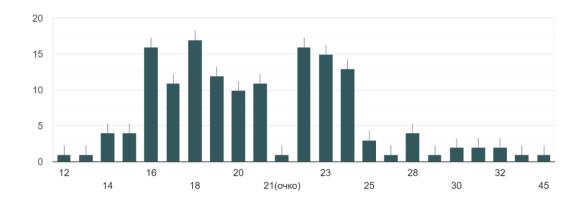


If yes, what are the reasons for using it?

15 ответов

Ecco auo to interaptine, marco internet more ocurable.	
I don't use	
Ads interrupts YouTube videos and it's annoying.	
They bother me and waste my time	
Ads are annoying and they often come with virus	
I dont like to see ads	
Mainokset kuluttavat liikaa aikaa ja ovat vittumaisia. Joskus ne ponnahtavat sinne missä hiiri on ja sitten niitä klikkaa vahingossa.	
I don't like my browser to be filled with ads, ads eats a lot of RAM	
Those damn Wish ads	
Too many ads	
Some sites are so filled with ads it just looks ugly. Also security issues with some ad services.	
99% of them are annoying and useless	

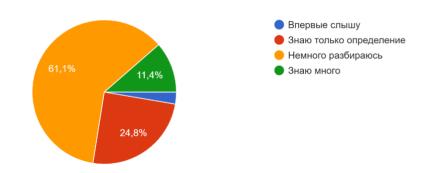
Appendix 2. Results of the survey (Russia)



Сколько вам лет?

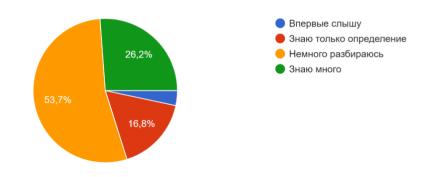
Какова Ваша осведомленность об искусственном интеллекте (ИИ)?

149 ответов

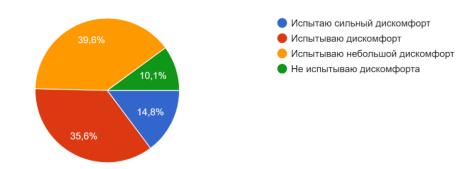


Какова Ваша осведомленность о персональном сборе данных в интернете?

149 ответов

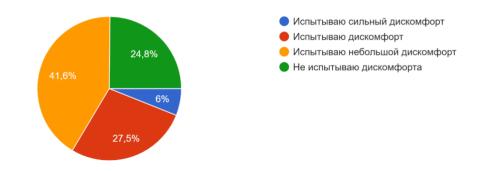


Каково Ваше отношение к сбору и распространению Ваших данных различными сервисами?

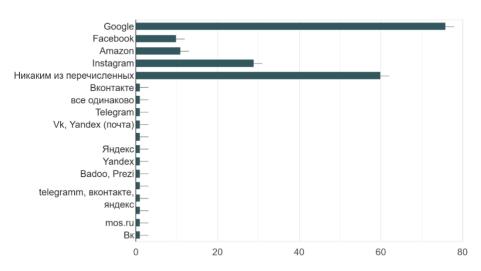


Как Вы относитесь к тому, что ИИ использует персональные данные пользователей для выполнения задач?

149 ответов

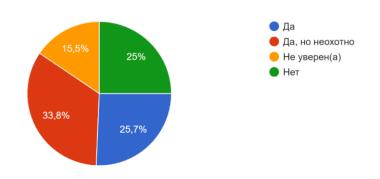


Каким сайтам Вы доверяете свои данные больше всего?



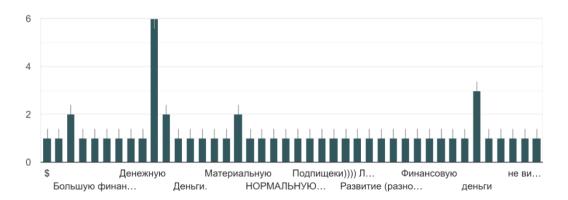
Вы бы делились своей личной информацией, если бы это приносило Вам личную выгоду?

148 ответов

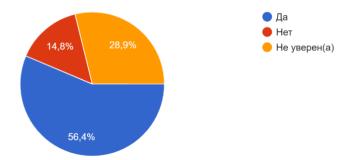


Если да, какую выгоду Вы бы хотели получать?

52 ответа

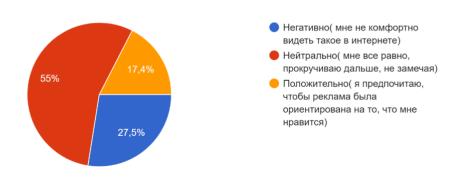


Вы предпочитаете, чтобы Ваша лента была персонализирована под Ваши предпочтения?



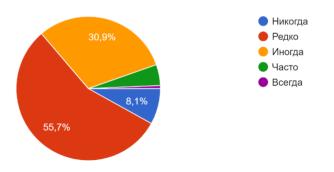
Как Вы относитесь к рекламе, персонализированной под Ваши предпочтения?

149 ответов

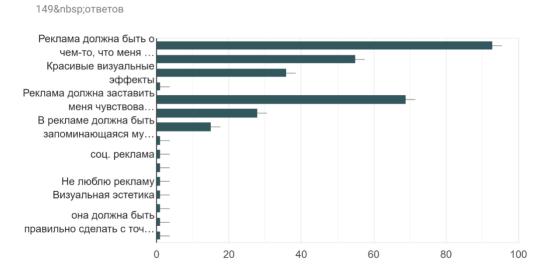


Как часто реклама в интернете привлекает Ваше внимание?

149 ответов

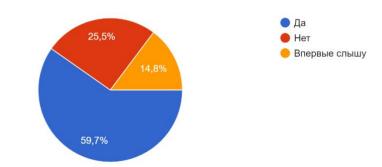


Что должно содержаться в рекламе, чтобы привлечь Ваше внимание?



Вы используйте AdBlock?

149 ответов



Если да, то почему?

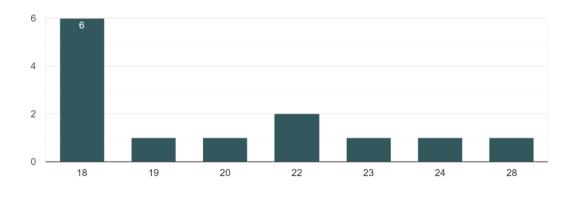
69 ответов

Использую браузер, полностью блокирующий трекинг и рекламу. Не хочу делиться личной информацией.	^
Назойливость некоторой рекламы слишком. Просто слишком	
Слишком много рекламы на сайтах	
Блокировать рекламу при просмотре видео	
Потому что адблок блочит назойливые поп-апы и прочую лабуду	
Назойливая и не интересная реклама	
раздражают рекламы на YouTube	
слишком навязчивая реклама	
Много назойливой и неуместной рекламы	
Убирает кучу мусора и фишинговых сайтов	
Спам	
чтобы случайно не словить спам и вирусы	-

Appendix 3. Results of survey (Singapore)

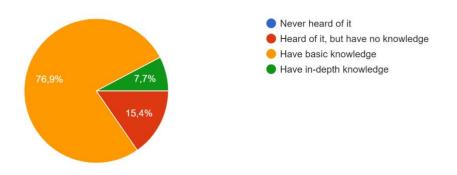
How old are you?

13 ответов

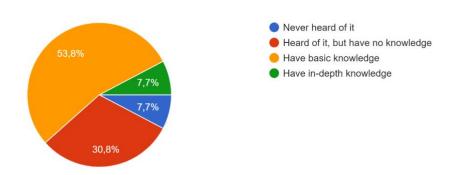


What is your personal knowledge of Artificial Intelligence(AI)?

13 ответов

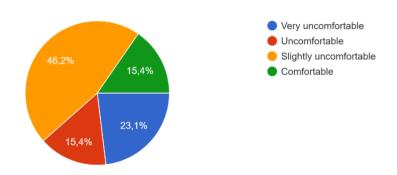


What is your personal knowledge of Data Collection? *



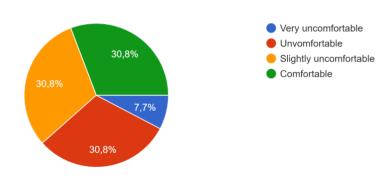
Are you comfortable with your personal data being collected and shared?

13 ответов

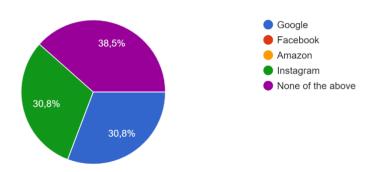


Are you comfortable with your personal data being used by AI to perform tasks?

13 ответов

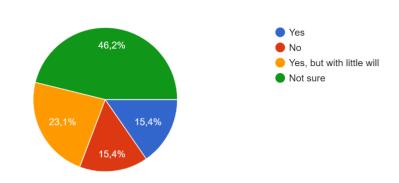


Which of this websites do you trust sharing personal information with? 13 ответов



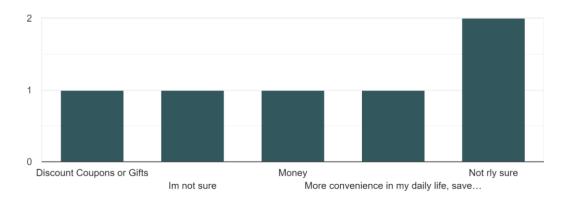
Would you willingly share your personal information if it came with benefits?

13 ответов

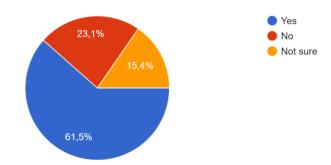


If yes, what kind of benefits would you like to recieve?

6 ответов

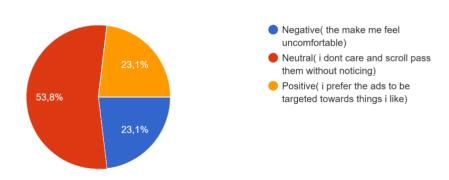


Do you prefer your digital feed being personalized under your preferences?



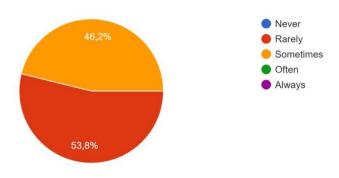
What is your attitude towards ads personalized under your preferences?

13 ответов

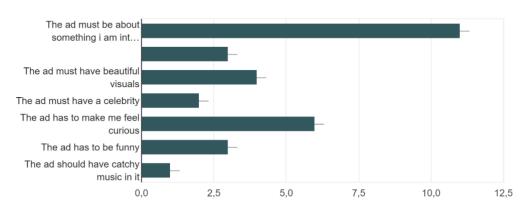


How often does an online ad catch your attention?

13 ответов

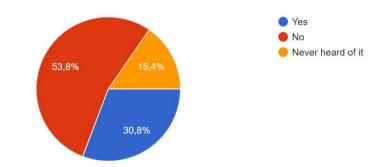


What does it take for an ad to catch your attention?



Do you use AdBlock?

13 ответов



If yes, what are the reasons for using it?

4 ответа

Although I have it enabled on one of my devices, I usually don't bother about it. However, I have to admit that it is much more pleasing to the eye when I don't have the constant ad screaming in my face.

Ads are annoying

its automatic

Unwanted ads, privacy