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ANALYSIS OF BEST PRACTICE OF ARTIFICIAL INTELLIGENCE IMPLEMENTATION IN DIGITAL MARKETING ACTIVITIES

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ABSTRACT

Rapid development of artificial intelligence is transforming the world we live in. Advancement in technology and consumer's needs creates the urge for rapid adaptation by companies operating in a volatile and uncertain marketing environment in order to adequately shape their marketing decisions and achieve the best results on the market. The availability of information to consumers is greater than ever before causing an increase in the needs and demands they expect when buying and consuming a product or a service which results in higher efforts of personalization and individualization while creating marketing messages. This is precisely what innovative and disruptive technologies, such as intelligent self-learning systems based on artificial intelligence, allow companies to gain a better insight into the consumer's needs and create marketing content that will result in higher engagement and conversion rates.

This study investigates and analyses set of examples of best practices of artificial intelligence implementation and the benefits of its usage in marketing activities and campaigns in automotive, retail and hospitality industry through predicting, testing and optimizing. Study shows the way artificial intelligence systems make an exceptional contribution to the optimization of marketing activities and overall marketing performance efficiency. The paper ends with the conclusions and recommendations how to implement some of the presented AI solutions into the Croatian business practice.

KEYWORDS: marketing, digital marketing, artificial intelligence

1. INTRODUCTION: ARTIFICIAL INTELLIGENCE AS LEADING CHANGE OF INDUSTRIAL REVOLUTION 4.0

Skilton and Hovsepian (2018) state that the Fourth Industrial Revolution brought new advances in science, commerce, engineering, but perhaps most importantly, advances in the comprehensive issues of corporate governance and the social impact of widespread

technologies. The phenomenon of the Fourth Industrial Revolution shows the fusion of human and machine intelligence and their intertwining. As stated by Millar, Groth, and Mahon (2018), the Internet phenomena that started twenty years ago enabled many technologies that have become mainstream, interconnected and essential for business. In the meantime, even more disruptive technologies emerged that overlaid existing tools which can be seen in the development and surfacing of quantum computing, artificial intelligence, the IoT, virtual reality, augmented reality, neurotechnology, blockchain, robotics, etc. Volatile, uncertain, complex and ambiguous conditions in today's fast-changing world are showing no signs of rate of change slowing down. Companies must have adequate tools, goals and strategies that enable them to thrive in the fast pace of the changing business sphere.

Artificial intelligence (AI) is not becoming a general-purpose technology, but a technology that uniquely holds the key to the exponential progress of society's development (Leslie, 2019) and in the opinion of Skilton and Hovsepian (2018), a key technological change for the 4th Industrial Revolution. In accordance with Burgess (2018), the sheer amount of data now available is the first driver of the explosion of the interest and activities in the field of artificial intelligence. As predicted by IDC (2018), the Global Datasphere, or the total extensiveness of digital data generated worldwide will grow from 33 Zettabytes (ZB) in 2018 to 175 ZB by the year of 2025. This is very important fact because artificial intelligence works on the basis of a large amount of data. Without data, an artificial intelligence system would be worthless as argued by Burgess (2018). It is clear that with the power and massive volume of big data, artificial intelligence will transform business processes providing higher efficiency and effectiveness which will help companies to tailor their products according to specific and individual needs of customers. As claimed by Zhang (2017) product and market data can provide a large step ahead of competition. Based on the types of data collected, marketing experts and strategists can find and shape innovative marketing strategies according to the trends emerging in the needs and wants, as well as expectations of the customers. Collected and analyzed data that is transformed to knowledge will allow companies to create individualized products and services that will better meet specific customer needs.

According to Ervelles, Fukawa and Swayne (2016) the big data offer behavioral information concerning existing and more importantly, potential new consumers that market experts use to leverage competitive market interests which allows us to define big data as the new capital in today's market. In order to achieve new revenue streams of external partners or increase the efficiency of internal processes, data needs to be transformed into knowledge and intelligence. Without relying on large-scale deep data analysis, advanced analytics and various other mechanisms, challenges will arise in obtaining the benefits of significant investment in digital transformation (Lichtenthaler, 2020).

2. RESEARCH METHODOLOGY

Main goal of this paper is to analyze some of the best global practices of implementation of the AI in marketing. For this purpose analyzed are selected AI based marketing activities of leading companies such as Google, Volkswagen group and AliBaba. As it would be hard to interview and obtain primary data directly from those companies this paper is based on collection of secondary data from various sources (desk research). The data were collected through the analysis of scientific and professional articles, mostly from English-speaking area, books by experts from the field and numerous relevant internet sources. In addition to the brief literature review, the analysis of three case studies is presented in this paper. Data collected from online

sources were used in the analysis of the case studies. Used research tools include methods of analysis and synthesis, generalization and deduction.

3. APPLICATION OF AI IN MARKETING

As claimed by Burgess (2018), artificial intelligence systems imply a wide range of significant capabilities. Currently, one of the most attractive areas of AI research are image and speech recognition, as well as clustering which identifies similar groups within customer behaviour data. Human capabilities would usually include recognizing patterns within small data sets with the assumptions of previous experiences to shape the patterns. On the other hand, with millions of data along with multiple features, it is impossible for human capabilities to process such amount of data. Processed data is then to be optimized. Optimization is at the heart of what people usually think AI does. Function of optimization is the closest to the characteristics of the human thought process without the need for true cognitive understanding. In the essence, if the set of possible initial states is known, as well as desired goal and a description of all possible actions to achieve a particular goal, then artificial intelligence can define a solution that will achieve the goal using the optimal sequence of actions from any of the initial states by an iterative trial and error process with typical example of making recommendations. Furthermore, prediction is also argued to be one of the most important functionalities of an AI. Aforementioned AI capabilities are being widely implemented in certain marketing segments like smart segmentation, programmatic advertising, virtual assistants, personalization and customization of the content etc.

Since consumers are the most valuable asset of any marketing-oriented organization, the strategy towards them must be individualized (Markić *et al*., 2015). According to Wodecki (2019), data from systems that register user behaviour allow the creation of profiles of their behaviour and interests allowing multichannel communication systems to reach users with a personalized message. Algorithms that support referral systems use statistical modelling methods, especially cluster analysis. Among the advanced solutions of this type is Persado which personalizes the visual or textual element of a call to action (CTA), which increases consumer involvement based on constant user cognitive profile that is constantly updated. Kose (2017) argues that today's personalization encompasses a whole set of activities that goes far beyond just storing data. It integrates functions to track consumer activity, collect data while interacting with multimedia objects, websites and other consumers. Integrated data provides new ideas for possible components of personalized marketing content.

Sterne (2017) describes how artificial intelligence can generate market segments through smart segmentation: machine learning brings personal profiles into segmentation categories that can be predefined or automatically generated. However, this capability is not limited to predefined categories because machine learning systems can also create customer datasets to identify potential new segments. For instance, machine learning can recognize time variations that indicate that customers are prone to leaving a shopping carts late at night. Thus, as claimed by Burgess (2018) artificial intelligence enables automatic identification and profiling of potential customers. Intelligent systems can identify and characterize new markets and customers based on the given user profiles using statistical twins. By creating statistical twins, we generate new potential customers based on the digital footprint of existing customers. Based on this data vectors, new customers in the digital space can be predicted using AI algorithms using the predictive analytics technique.

According to Gentsch (2019) first-generation bots with a well-defined dialogue direction and controlled keywords are becoming more intelligent due to advances in AI. Also, current advances in the development of natural language processing further increase the dynamics of chatbot advancement. The development of this form of communication brings a number of trends such as voice-driven commerce that provides consumer advice and voice shopping, personal digital assistants who help users with purchasing goods, planning and reservations and algorithmic marketing that integrates algorithms of ad bots in all steps of marketing process. Success of a brand or company in the future could depend on the presence of certain products or services in the algorithm of a digital assistant. If the user wants to book an accommodation or buy a bag, digital assistant will consider only those companies that are present in the network of algorithms. In the future, the focus of customers will be more on the convenience of the process, from consideration to the purchase of the product or service itself and it means that companies which will understand how to connect with digital personal assistants will gain a significant market advantage.

It can be concluded that the capabilities of artificial intelligence are a very complex area that is constantly changing and evolving. In order for company to successfully implement an artificial intelligence system, it is important to identify and recognize artificial intelligence capabilities that suit their business needs.

3.1. PERSONALIZING THE SALES EXPERIENCE IN ŠKODA AUTO

According to Outsell (2017) artificial intelligence can be used to personalize sales experience by analysing user demographics, transaction history and network activities like monitoring web traffic, returning visitors or customers, time spent on website or shopping cart abandonment which can help generate individualized product recommendations. Through predictive models, the platform sends a different set of offering content to the customer it detects for a potential online purchase of a particular model, depending on the content he had studied before. In addition, using behavioral data, a machine-based learning platform can detect potential customers and alert the sales team to contact them before competition.

Škoda, a Volkswagen Group subsidiary, released a creative campaign for its new Fabia model with the goal of personalizing sales experience and coming closer to its target groups. In the campaign to introduce new Fabia model, Škoda used personalized messaging to attract existing and new customers through the YouTube platform. To launch its Fabia model in 15 European countries, Škoda has partnered with marketing agency PHD and Google/Zoo – a creative think tank for brands and agencies. The main goal of the campaign was to match the ads with the interest and demographics of the Škoda target audience. Given the fact that demographic target audience was younger group with emphasized values of choice, adjustment and independence, a thought was given on how to connect colour, as an important factor in connection of a consumer emotion and brand perception, and the main attributes of target group. In order to carry out a successful campaign of combining aforementioned factors, Škoda teamed up in a collaboration project with a well-known psychologist which resulted with idea of turning colours into viewer personas and using them as guidelines for creative solutions. Individual viewer personas were then matched with signals collected from Search, YouTube and apps. For example, the naturalist persona included man or woman over the age of 30, oriented towards nature and organic food with highlighted travel desires and was labelled with green colour. The daydreamer persona was labelled with blue colour and was represented by male aged 30 and over who was an easygoing guy, works in or is connected with NGOs and lives in open relationships. Škoda has created a number of similar target groups with clearly defined peculiar

characteristics and specified colour attribute. Using this method, audience bases were clearly defined. To customize the creative solutions at scale, Škoda used Director Mix, a tool that provides thousands of video ads for different target groups using simple elements like visuals and copy. YouTube's Director Mix enabled the creation of a 20-second TrueView ads comprised of simple creative elements in order to customize it for each person. In addition to that, it enabled quick and easy translation into 16 different languages (ThinkWithGoogle, 2019). This solution, while combined in large number of adaptations, is believed to enable exceptional customization which is the key of personalized content marketing that advances customer engagement and their awareness and connection to the brand. New types of technologies are enabling higher targeting precision with the help of intelligent systems that are able to potentiate numerous content by combining variations of uploaded data from advertiser.

As stated by ThinkWithGoogle (2019), throughout the campaign, a large increase in viewer retention and viewing rates were observed, two metrics that ultimately signal attention from the customer. Customized creative advertisements that were tailored to the affinity of the target groups ensured that people were paying attention to video ads and felt less likely to skip them. Over a thousand different video ads have been created and confirmed the impact of tailoring ads to the consumer. The overall results of this campaign were surprisingly significant. Review rates were 71 % higher in countries where Director Mix was used, and the average video review completion rate in the top five countries was almost 80 % higher than the reference value.

The growing popularity of the use of digital advertising is also indicated by the research provided by Emarketer (2019) which pointed out that spending on digital advertising had exceeded 50% of total spending on advertising, which means that the digital network represents half of the global advertising market for the first time. According to forecasts, spending on digital advertising will reach as much as 517.51 billion US dollars by the year of 2023.

3.2. APPLICATION OF AI FOR THE INCREASE OF BRAND SAFETY ON YOUTUBE

Brand safety is often listed as one of the main concerns in online advertising, especially regarding video ads on the Google's YouTube video platform. Along with several scandals that occurred concerning the controversy of ad misplacement, it is more important than ever that companies are backed up by Google with brand safety assurance and larger efforts in suppression of placing ads in videos containing harmful and violent content.

Over the past 3 years YouTube was brought under mainstream media attention with a disclosure that some established brands are involved in funding terror and disinformation channels by placing ads in a video with harmful and radical content such as Nazis, white nationalism, ISIS, North Korean propaganda, paedophilia, etc. According to YouTube monetization policies, channels with over 1,000 subscribers and 4,000 wives over the last 12 months are qualified to apply to earn money from YouTube and they are given a part of YouTube's ads revenue from the ads running during their videos. To ensure that unsuitable and inappropriate channels and videos are not monetized, YouTube incorporated stricter rules on which channels are suitable for generating revenue (Murphy *et al*., 2018). Some of the leading brands including Nestle, Disney, Adidas and Mars pulled their ad investments due to related incidents in short period of time. One of the recent brand safety scandals caused by YouTube has been related to the video about climate change denial and misinformation where brands like Samsung, Danone and L'Oreal appeared in the ads. Mentioned scandal was solved in a smaller scale damage, with brands deciding to remove their ads on videos promoting climate change misinformation, and

not on other videos on the platform unlike the case from 2017 regarding terror and violence content when they completely boycotted the platform and placing ads on it (Joseph, 2020). Companies usually do not stop placing ads on YouTube permanently because it is one of the largest platforms through which they can target younger groups that can hardly be reached through the mainstream television channels.

One of the main concerns of the advertisers is that they did not realize their ads were placed with inappropriate content. Commonly, companies can determine certain targets when placing ads based on consumer behaviour and demographic characteristics. In addition to that, it is possible to blacklist channels and include a filter for sensitive subject exclusion constructed to block ads from popping up before certain content or channels. Even with application of the filter, companies like Amazon, Netflix, Hershey and Hilton found out that ad misplacement still happened while they were not aware of it. All of the companies stated that they are working closely with Google to address the problem and prevent further occurrence of this type (Murphy *et al.*, 2018).

In response to increased advertisers' concerns, digital advertising platforms are turning to artificial intelligence systems to upgrade and improve security and assurance of brand safety and avoid ad placement right next to inappropriate and harmful content on the largest video platform (Burtka, 2019). YouTube made several partnerships with third-party software solutions like DoubleVerify and Integral Ads Science to ensure brands observation of suitability of their ads placed on the platform. Prior mentioned solutions incorporate machine learning in order to determine appropriateness of ad placement. In addition to that, due to importance of improved ad placement, Google incorporated AdSense auto ads based on machine learning system to identify content that can be offensive to viewers and advertisers like terrorism-related content (Swant, 2017). Crucial point of this technology are machine learning systems that are fuelled with advanced algorithms based on deep learning processes which deliver speed and efficiency (Burtka, 2019) needed for this type of platform that generates almost 400 hours of video materials per minute (Watson, 2019). Usage of harmful detection tools suppressed 75% of extremist videos before human detection concluding that the systems improved on a large scale with the help of artificial intelligence powered technology as stated by Watson (2019).

On the basis of aforementioned Google's efforts to address the huge concern of ad misplacement and ensure brand safety by implementing artificial intelligence powered technology, it can be concluded that AI systems are by now widely used in all aspects of the marketing industry, not just sections leading to higher revenue streams. AI systems based on deep learning algorithms have the capability to process huge amounts of data and therefore provide solutions to address the problems of brand security and ethics on digital platforms such as YouTube.

3.3. REINVENTING THE TOURISM SECTOR: SMART HOTELS POWERED BY ARTIFICIAL INTELLIGENCE

As stated by Kotler and Keller (2016), new market behaviours, opportunities and challenges have made the market different from 10 years ago. The pace of change and the range of technological advances, as well as availability of huge amount of data which gave consumers larger informational power forced companies to improve their "digital balance". In the digitalized era, systems based on artificial intelligence are being used not just in the IT industry, but in many various industries in different functions like finance, sales and marketing (Samala, *et al*., 2019). Usage of artificial intelligence in hospitality offers a wide range of implementation

possibilities in every process connected to customer: before arrival, at the day of arrival and post arrival activities. On the report of Samala *et al.* (2019), artificial intelligence is applied in tourism industry for diverse purposes such as individualizing the recommendations, managing fast response time towards customer and bettering the level of personalization and therefore transforming the regular tourism industry into an intelligent industrial hub. According to Makadia (2018), for utilizing the potential of AI, there are many options of elements that can make a certain hotel intelligent and they can include concierge robots, digital assistance, voice-activated services and travel experience enhancers which work upon the volumes of data that its given. According to Siteminder (2019), bigger impacts of intelligent systems are capable depending on volume of data. Important task of the hotel is to gather large volumes of data about travellers so systems can tailor the experience to meet specific customer needs. With a large scope of possibilities in data-analytics, intelligent systems can also help with creating loyal guests with activities in the post arrival stage. AI platforms can track numerous reviews on different channels and use this data to create personalized services, communications and promotional offers (Lukanova, 2019).

Many hotel brands such as Hilton, Wynn Las Vegas or Marriott already implemented artificial intelligence systems with the goal of improving and enhancing guest experience (Siteminder, 2019). In order to transform customer experience, Hilton implemented Connie, an AI-based concierge that relies on IBM's Watson computing intelligence that provides support to customers through real-time recommendations and query answering on the spot while constantly learning from frequent interactions to humans. On the other side, Wynn Las Vegas, world class hotels known for luxury and great customer experience, integrated Amazon Echo with the purpose of digitalizing its 4,784 rooms and make technical functionalities like temperature or light adjustments intelligent (Makadia, 2018). As stated by Oracle (2019), faster response time and faster problem resolution are one of the most important drivers of higher customer satisfaction in general. Availability to scale those two factors with efficiency and effectiveness by shortening guest wait times in very significant ways and providing immediate access to information needed is one of the main capabilities of artificial systems used in hotel business as mentioned above. Modern customers are expecting seamless experience while taking a hotel service. Millenials, who now cover around 75% of all hotel guests, spend on average 4,000 US dollars per year on travel experiences are representatives of always-on technology surrounding. They expect fast response process and their overall satisfaction can decrease if experiencing longer waiting times for certain activities like check-in, check-out or room service with having control of it through app or in-room device. In fact, as reported by Oracle (2019), ease of communication between hotel and a guest is key to better relationship between the two sides. Large hotel companies even launched their own guest messaging app which enables richer data connection with each guest. Therefore, data systems can recognize that guest was playing tennis on every occasion of his stay, so it is possible to deliver him a customized message informing him about opening and closing hours of a tennis court or send a promotional offer. According to Makadia (2018), implementation of intelligent systems that deliver enhanced consumer expectations is what many modern hospitality leaders aspire to fulfil. As reported by Oracle, breakthrough innovations in technology in the field of AI, Internet of Things and robotics are quickly becoming an important part of hotels and resorts across various sizes. They can be a significant driver of competitive advantage on the market because of essentially changing the way a hotel is interacting with a customer.

As reported by Cadell (2019), Alibaba, Chinese multinational technology company, is transforming hotel industry business with its futuristic, AI powered hotel named FlyZoo that implements cutting-edge technology. All of the main functionalities regarding traveller's stay

are maintained by artificial intelligence systems, including the whole process from booking to check-out. The range of capabilities is huge and include in-app booking with the possibility of virtual display of the rooms, facial check-in system, voice powered Tmail Genie smart assistant in rooms in charge of adjusting the temperature and lightning, opening and closing the curtains, playing music, answering simple questions and room service (Brennan, 2019), robot restaurant service with the facial recognition paying system that automatically charges the room rate (Cadell, 2019), high-tech gym experience including interactive screens with guided workouts (Biron, 2019) and one-click check out system in the app what automatically signalizes the room to lock and charge through Alibaba online wallet. Due to privacy and safety reasons, the system immediately erases facial scan data. Even though, FlyZoo is completely powered by intelligence technology systems, it also employs a number of human employees in the positions of chefs, cleaners and receptionists to assist with check-in procedures for the guests unwilling to use facial recognition technology. As stated by Alibaba, FlyZoo represents an inspiration to empower the tourism industry to embrace innovation (Cadell, 2019). According to Oracle (2019), the only question is the degree of usage of artificial intelligence in the future. Although, many travellers are largely embracing seamless experiences on the technological basis, it is most likely that future hotel services will functionate best on hybrid model, with the combination of human and machine intelligence, working with each other. Even if the scope of responsibility of human working force decreases with smaller number of routine tasks, their roles are likely to remain the same, with larger focus on delivering the best accommodation experience. To conclude, implementation of intelligent systems in hotel industry is growing at tremendous rate with number of technical advantages that enhance customer experience being huge. On the other side, companies also face financial benefits in a long term. According to Oracle (2019), 89% of hoteliers agree that artificial intelligence systems undoubtedly reduce operating costs in the customer support function, with visible increase of brand awareness and customer loyalty resulting with revenue growth. In addition to that, 86% of hoteliers agree that artificial intelligence actually improves employee satisfaction with managing day-to-day routine tasks which allows employees to focus on delivering greater value to customers. The fact that 76% hoteliers already invested, or plan to do so in the next 12 months, in one or more artificial intelligence-based technologies indicates that hoteliers are cutting-edge technology oriented for the cause of enhancing customer experience.

A successful implementation program of artificial intelligence includes a number of elements of digital and analytical transformation such as setting up the right data ecosystem, developing or purchasing appropriate artificial intelligence, adapting processes, skills and culture in the enterprise (McKinsey, 2017). New technology adaptation requires complete understanding of employees of how AI systems can improve customer experience and their own employee experience, as well as how they can work together with the intelligent machine system to their own advantage (Oracle, 2019).

4. CONCLUSION

This paper presented a brief overview of exciting application of AI for the marketing purposes in some of the world's leading brands/companies. Based on a case study analysis of the best practice of artificial intelligence in leading companies such as Google, Alibaba and VW Group, it can be concluded that implementation of "intelligent systems" in marketing processes results in positive effects on corporate performance such as an increased conversions, sales growth, discovery of new potential customer segments, creating loyal customers and enhancing overall customer experience. This is becoming a growing trend. Self-learning intelligent systems can analyze and detect micro trends on market in a very short periods of time and shape strategic

marketing decisions that will deliver optimized results. Such AI based systems can also, based on testing, discover the most effective content that works best for a particular target audience, which enables customization of content placed in front of new and potential customers on corresponding platforms. Such AI solutions are not the future but rather present operating solutions suited for different marketing purposes. What are implications for the Croatian companies? Most of the Croatian economy lacks the scale. However, several sectors with a huge amount of customers or clients that are abundant with data are FMCG retailing, banking and tourism. Because of their market concentration (FMCG retailing and banking) and size (tourism), leading companies in those segments could afford implementation of the advanced AI solutions and quickly reap up the benefits. This doesn't mean that smaller companies and startups cannot use affordable AI solutions in a creative way that will give them competitive advantage. Increased rate of digitalization and remote working and shopping caused by COVID pandemic also changed environment conditions in favor of the AI application. As the result of the pandemic more and more work, socializing and shopping is being done online which makes digital marketing and application of AI in marketing a necessity for making optimized decisions and customized individual approach to each client – an approach which is becoming the foundation of competitive advantage on the "new normal" marketplace.

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