

THE USE OF ARTIFICIAL INTELLIGENCE IN MARKET ANALYSIS AND BUSINESS PLAN DEVELOPMENT

Mirko Smoljić⁴¹

Matija Indir⁴²

Abstract

This paper explores artificial intelligence and its impact on business, how processes are improved, and how artificial intelligence can support all this. It examines the various segments it affects and whether it will only have positive sides on business operations. Additionally, it investigates not only how it will affect the business process itself but also the human workforce and whether people will be able to keep pace with artificial intelligence. The paper will describe the main concepts and definitions of artificial intelligence and its impact on the actual business of companies, and general concepts in the use of artificial intelligence and business management. It will also explain in detail the development of artificial intelligence throughout history and branch out into the types that we will discuss in the work, as well as those most relevant in today's times. Moreover, the application of artificial intelligence in companies, technological aspects of its implementation for business success, the importance of artificial intelligence in market analysis and business plan development, and ethical aspects of using artificial intelligence and potential risks will be described.

Keywords: *artificial intelligence, impact on business, implementation, risks.*

INTRODUCTION

The first systems of artificial intelligence belong to the early development phase that lasted from 1940 to 1950, a period when the first electronic computers were created to mimic human intelligence. Alan Turing developed the Turing Test in 1950 to assess the intelligence of machines. The second period saw the emergence of symbolic artificial intelligence, lasting from 1950 to 1960, a period marked by research into symbolic AI. During this time, systems were used to create human-like thinking. The Dartmouth Conference in 1956 marks the first true mention of the term "artificial intelligence." The third period lasted from 1960 to 1970, during which there were high expectations until various challenges and limitations of symbolic artificial intelligence appeared in the mid-sixties. The biggest problem was the lack of sufficient resources, leading to various failures in achieving goals, which led to the so-called "AI winters." The fourth period is when expert systems began to be developed, from 1970 to 1980,

⁴¹ Academician, Prof. Mirko Smoljić, Ph.D. International Research Academy of Sciences and Arts - IRASA and assis. prof. at the University North, Trg Žarka Dolinara 1, 48000 Koprivnica, mianu.croatia@gmail.com, msmoljic@unin.hr

⁴² Student of the third year of the undergraduate professional study Business and Management, University of the North, maindir@unin.hr

with a focus on them. They were used based on databases and rules to solve specific problems. The fifth period saw a resurgence and lasted from 1980 to 1990. During this period, the power of computers began to increase, and various new algorithms and models were developed that stimulated renewed interest in AI development. Various systems that enabled machine learning appeared, and research moved towards neural networks. The sixth period, which has lasted from 1990 to the present day, is the flourishing of machine and deep learning. In this period, we received excellent feedback from multi-layer neural networks as they succeeded in recognizing patterns, and we achieved very good results such as the development of various computers, algorithms, and large datasets. Deep learning has become a main branch of artificial intelligence. Today, artificial intelligence is applied in various industries, including healthcare, finance, transportation, marketing, and many others. AI systems such as language models, with the most well-known being GPT-3 and GPT-4, prove the ability to generate various complex tasks and text with understanding from context, have diverse applications and roles in our lives, are part of the present and everyday life, and will have a significant impact on all segments of life in the future.

1. TYPES OF ARTIFICIAL INTELLIGENCE

Artificial intelligence has many branches and various types, each with its own individual characteristics and capabilities. Weak artificial intelligence is also known as narrow or limited AI. Such systems are designed to perform specific tasks without much understanding of the context. For example, computer programs for speech recognition, facial recognition, and similar are tailored to solve specific problems.

Furthermore, there is strong artificial intelligence, which possesses explicitly human-like characteristics and capabilities, sometimes even surpassing them. It would have the ability to learn, understand, and solve any task that a human could also do. Today, this has not yet been achieved, while most artificial intelligence systems are limited to specific tasks.

The next type of artificial intelligence is machine learning, considered a branch of AI that enables computers to learn from experience and adjust their data accordingly. It is divided into several approaches: supervised learning, where algorithms are drawn from data; unsupervised learning, where algorithms look for patterns in unlabeled data. Examples include algorithms for regression, clustering, classification, and various similar tasks. Deep learning is a part of machine learning that uses multilayer neural networks for processing and analyzing various data. Deep learning is not only effective but is used in tasks such as image processing, speech recognition, and natural language processing. It relies on deep neural networks with multiple layers that can automatically extract features from all data.

Reactive artificial intelligence is part of systems that can react to conditions or stimuli and have pre-programmed responses. Such are used in various specific environments or for performing specific tasks, like production robots that already know the steps they need to follow. Evolutionary artificial intelligence is designed according to human evolutionary principles, and such a type of AI uses evolutionary algorithms to

improve its own performance. It is commonly used in optimization and solving problems where the best possible outcomes are sought.

Hybrid artificial intelligence is actually a combination of many approaches and types of AI. It attempts to combine the different advantages of various approaches to achieve better efficiency and flexibility. The development of artificial intelligence is accelerating day by day and is growing rapidly. All these types of artificial intelligence already have very good features, but they continue to grow and improve daily as the enhancement of AI itself progresses. They already have good applications and results in all possible segments, yet they continue to evolve.

2. APPLICATION OF ARTIFICIAL INTELLIGENCE IN BUSINESS STRATEGIES

The application of artificial intelligence in various enterprises and companies brings numerous privileges and positive aspects in its use in business processes. Some of these advantages include the ability of artificial intelligence to analyze markets, better monitor competition, compute statistical data, and create statistical displays more efficiently than traditional methods, and perform various processes faster, better, and more accurately. It enables innovative ideas, more complex and precise decision-making that must be made quickly. Products and services can be more specifically tailored to the needs they are intended to serve. Data analysis with the help of artificial intelligence can assist in more clearly and quickly understanding the desires and criteria of consumers, ultimately enabling the company to create more individualized and personalized recommendations for offers and products. All this artificial intelligence used is based on algorithms that assist systems in suggesting personalized product or service recommendations and thus adapt to them. Such offers can meet the criteria of every individual due to their desires and needs which artificial intelligence can better recognize than traditional methods. Competitor monitoring in the market is conducted such that market monitoring analysis is performed by artificial intelligence algorithms that work based on large data sets, thereby enabling a better understanding of the market, new market trends, consumer analysis, and the current market state. Artificial intelligence helps identify various potential threats in the market, allowing companies to develop their own strategies to prevent decline or increase growth. Improving general business processes can be conducted by introducing artificial intelligence into business processes, enhancing the speed, accuracy of task execution, and helping reduce costs. Automation of everyday tasks can facilitate inventory management due to predictive analyses and production improvements aided by artificial intelligence. Introducing various chatbots eases communication with customers, offering faster and better accessibility to services or products. Artificial intelligence can assist customers by analyzing their data, criteria, and inquiries more easily and quickly, understanding the context of customer inquiries through algorithms, and providing a better individual response. Companies use various types of data analysis tools, and artificial intelligence can assist in analyzing large data sets due to its ability to make personalized decisions. Companies analyze various data to recognize market trends and opportunities that would be harder to detect with a mere glance. In analyses that involve various predictions, including financial ones, different

artificial intelligence models are used to help predict future states and based on that, make tailored analyses. Additionally, consumer behavior and conditions can be predicted and based on that, various offers, advertisements, and campaigns can be made to satisfy their interest. Advertisements that are individualized and personalized based on consumer interest can contribute to the enhancement and development of marketing strategies. The application of artificial intelligence in business strategies helps enterprises better and more accurately understand the competition and the market itself, improves processes and experiences, enhances other internal processes, and thus can achieve advantages over competition in the market.

3. TECHNOLOGICAL ASPECTS OF ARTIFICIAL INTELLIGENCE IMPLEMENTATION

The technological aspects of artificial intelligence implementation involve various segments and elements that are crucial for technological approaches and form the foundation for developing and integrating artificial intelligence into different business systems. High-quality data are essential for successful AI implementation due to their good understanding and accuracy. Well-labeled, diverse data that provide a comprehensive overview aid in training models and improving the accuracy of artificial intelligence. Appropriate datasets are used to prepare, train, validate, and test models, making them key to successful implementation. Machine learning uses various algorithms such as regression, classification, and deep learning, all of which depend on the specific tasks the system performs. The selection and development of suitable models, such as neural networks, SVM (Support Vector Machine), or decision trees, are important steps in achieving desired capabilities. Enhancing the speed of model training is facilitated by graphic processing units (GPUs) due to their ability to perform tasks in parallel. Artificial intelligence can be implemented on devices instead of in the cloud, which can lead to improved edge computing capabilities. Programming languages that support AI implementation include TensorFlow and PyTorch. They are popular in AI development and general machine learning. With the use of various technologies specialized for different tasks, artificial intelligence enables the application of systems that understand natural language or have the ability to interpret visual information. Various new AI models enable new techniques that can create new data or images. Depending on the needs to be met, a choice is made between cloud application and on-device application. These two applications can have a significant different impact on capabilities. Constant updating of models is essential to maintain and develop their security and reliability and improve capabilities. Controlling security protocols and data is very important to protect data and prevent misuse of artificial intelligence. Technological perspectives on the application of artificial intelligence require that approaches encompass infrastructure, algorithms, data, and management in order to ultimately provide a comprehensive overview and ensure the successful introduction of new technology into business systems.

4. TECHNICAL REQUIREMENTS FOR SUCCESSFUL IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE

To properly and successfully implement artificial intelligence, it is necessary to adhere to technical requirements, a series of segments and elements that are needed for the development of new capabilities and the maintenance of the existing AI system. GPUs are used to accelerate machine learning operations, especially in training deep neural networks that require substantial computing power. Data must be accurate, well-labeled, and precise, but also diverse, to enable models to learn to adapt to different requirements, thereby achieving successful AI application. A critical factor in achieving the best capabilities is the careful selection of data for training, validating, and testing models. Applying various deep learning and machine learning algorithms is the best way to solve the desired problem. Different techniques must be applied to enhance models to achieve desired capabilities and draw out the best resources. Selected programming languages are often used to achieve the best possible model optimizations and thus achieve desired changes using selected resources. Specific frameworks and data that facilitate the development and application of artificial intelligence must be used and respected. When cloud storage is used for data, training models for predictions improves performance over the current period. Security protocols must be adhered to ensure data protection and prevent theft or manipulation. All aspects of security protocols must be considered due to potential attacks to ensure system security. The best way to achieve this is through the education of teams that maintain and develop these systems. Such teams must monitor systems and actions with artificial intelligence. We can consider the implementation of artificial intelligence successful when it complies with all requirements with existing business systems to facilitate the exchange of information. All these technical requirements together constitute a successful application of artificial intelligence in the business environment, ensuring high levels of security, performance, and system sustainability.

5. INTEGRATION OF AI WITH EXISTING BUSINESS SYSTEMS

The application of artificial intelligence with existing business systems represents a significant step in realizing the full potential of this type of technology within an organization. This application enables collaborative action between analytical tools or already existing systems. This improves business operations and decision-making, creating a competitive advantage. A major challenge in applying artificial intelligence with existing systems is aligning data architecture. Artificial intelligence often requires access to large data sets in specific formats that ultimately must fit into existing data structures. Quality data preparation and alignment are essential steps to enable proper model learning. The technical approach to integration includes the use of APIs (Application Programming Interfaces), which allows for communication between artificial intelligence and existing systems. If necessary, artificial intelligence can be implemented in the cloud or at the edge of systems to improve data processing speed and reduce latency. The application of artificial intelligence also requires additional training and adaptation of employees. Employees must be trained to work with these

types of tools and must know how to interpret the results provided by artificial intelligence. Not only must they know how to interpret results, but they must understand how they function and how they contribute to improvements within organizations. Ensuring the security and ethical use of artificial intelligence in existing systems is necessary and inevitable. The application of security protocols, monitoring, and managing models, along with regular checks, are essential to maintain good security and compliance with ethical guidelines, and they are key to long-term success. The integration of artificial intelligence with existing business systems involves multiple aspects that must be focused on and monitored for success. They require various types of aspects and approaches that encompass technical, organizational, ethical, and security skills and aspects to realize the advantage of this type of technology within a company.

6. THE IMPORTANCE OF ARTIFICIAL INTELLIGENCE IN MARKET ANALYSIS

Artificial intelligence plays a significant role in market analysis because it can process large amounts of data at once, extracting key information to provide better insights into market competition. Artificial intelligence offers faster and more accurate analyses than those performed traditionally because it can analyze large volumes of various data. This is established because artificial intelligence is utilized and integrated into various processes, including market analysis. Target audience identification is performed using user analysis algorithms, and artificial intelligence can assist in identifying target audiences based on their characteristics. Personalized marketing strategies can be tailored to the specific needs of each customer group. Predictive analysis uses artificial intelligence algorithms to forecast trends and consumer behavior. In this way, companies can adjust their strategies and products to meet customer expectations and market demands. Artificial intelligence can identify hidden trends and future market expectations because it can predict them. AI companies thus have ample time to react to changes in demand or consumer behavior. It can also monitor the online presence of various competitors and analyze their strategies and track reviews to create a comprehensive insight into competitive conditions and adjust their own. Businesses in this way better understand and monitor, but ultimately adapt their strategies to enhance operations. Based on consumer behavior analyses, artificial intelligence can create individualized service or product recommendations for specific users, thereby developing the individual's experience. Artificial intelligence can also analyze the state of social networks, newspapers, blogs, websites, and other information sources. In this way, it can monitor and manage reputation, all through artificial intelligence. Businesses track market price changes and adjust their own accordingly. This approach saves time and resources, allowing businesses to redirect the rest to other purposes or strategic planning. Artificial intelligence can analyze customer feedback on products or services and their reviews to assist in creating new ideas, products, or services according to their preferences. By combining data analysis and artificial intelligence that can project future trends, businesses can gain better insight and understanding of the market and act by adjusting strategies for faster and smarter decision-making. We see how artificial intelligence assists in the entire

business environment and plays a significant role in every segment of a company, with its use increasingly being implemented.

7. THE IMPORTANCE OF ARTIFICIAL INTELLIGENCE IN BUSINESS PLAN DEVELOPMENT

Artificial intelligence in business plan development can have a significant impact and contribute to better, faster, and more precise results. It is crucial to determine the target audience, predict demand, conduct financial analysis, automate and digitize processes, prepare and train artificial intelligence algorithms if necessary, provide decision-making advice, customize and personalize recommendations, and develop a business model for all other segments needed to perform a complete market analysis. Artificial Intelligence deals with large amounts of data to provide good insights into trends, competition, and consumer needs that are ultimately analyzed. Artificial intelligence algorithms can independently perform analyses of social networks, reviews of various products, and other data sources to obtain precise and deeper insights into the competition and the market. Algorithms can be used to determine the audience based on demographic and psychographic characteristics and consumer behavior. In this way, they can adjust marketing strategies and direct them towards products that the market and consumers demand. Analysis using artificial intelligence can assist in predicting future demand for services or products. This facilitates production planning, inventory management, and the improvement of marketing campaigns and advertising. Additionally, it can assist in creating financial forecasts and statistical analyses. Analyses that are digitized and automated can simplify future presentations of a company's revenue, costs, and profits. Artificial intelligence can also automate daily tasks related to data analysis, report creation, and other administrative duties. Staff can then focus on other strategic aspects of business planning. Natural language algorithms can analyze large amounts of text left by customers and review content, surveys, and comments to gain insights into consumer attitudes and tailor products or services to them. Competition can be monitored online, as well as their marketing strategies, to gain insight into their strengths and weaknesses. Recommendations can already be based on existing data and information, including analysis and insights into pricing, process improvements, or marketing strategy selection. Artificial intelligence-based support systems can provide individualized recommendations to customers and enhance their overall experience, thereby attracting them to make repeat purchases. Regarding the development of new ideas and models, artificial intelligence can analyze market data about trends and assist in the development of new products. These products can be key to the future success of the company and its business processes. The application of artificial intelligence is increasingly used in daily business operations and analyses, thereby assisting the company. It is crucial to know how to properly use the available information and tools offered to the company to adapt its strategies for various needs.

8. ETHICAL ASPECTS OF USING ARTIFICIAL INTELLIGENCE IN BUSINESS

As previously mentioned, ethical aspects and rules in the use of artificial intelligence are very important due to the different perspectives of individuals. Artificial intelligence algorithms can harbor biases contained in the data sets on which they were trained, ultimately leading to incorrect decisions. When it comes to equality of access and fairness, this becomes a key segment to focus on in the results. In algorithm operation, a lack of transparency can create problems in understanding how they arrive at certain decisions. Just as with employees, transparency is crucial in gaining consumer trust. With the use of big data, privacy issues become a risk, so it is important to address this segment to prevent misuse. Regarding data security, protecting the privacy of users becomes a primary goal in adhering to ethical rules. Artificial intelligence can change workers and employment in companies, and it is important to monitor workforce training or retraining and its consequences to avoid conflicts. Clear boundaries must be set regarding responsibility due to the ethical applications of this technology. Employees must be educated about the introduction of artificial intelligence into the company so they can understand the ethical code and ethical issues to prevent problems and conflicts. When companies use artificial intelligence, they need to take full responsibility for any difficulties or consequences of its application. The impact on society and the economy must be dedicatedly monitored. Artificial intelligence can have a significant environmental impact, especially when it comes to financial calculations. Sustainability in the application of artificial intelligence is also important from an ecological perspective and environmental sustainability. Implementing guidelines in business practices is a crucial step in the use of artificial intelligence in a company. Considering these ethical aspects is key to a good business environment for those who use or wish to use artificial intelligence to ensure good practice and sustainable use of such technology. Therefore, ethics becomes an essential part of the strategy for companies that aim to achieve long-term goals and success amid market competition.

9. THE NEED FOR EMPLOYEE EDUCATION WITH THE INTRODUCTION OF AI

Educating employees about artificial intelligence is important due to the rapidly advancing technology and its increasing presence in businesses. The implementation of artificial intelligence in companies changes the way jobs and tasks are performed, as well as decision-making processes. Employee education is essential to harness all benefits while ensuring no one is harmed. Education enables employees to understand the use and functioning of artificial intelligence. They need to be familiar with basic and fundamental concepts and terms such as neural networks, deep learning, and machine learning to understand how artificial intelligence functions. With this knowledge, they will understand how specific tasks are performed with its help. Education is not just about theoretical training and knowledge but also about practical application in specific business opportunities. Employees should recognize how and where artificial intelligence can help improve existing processes, enhance its performance, increase efficiency, and contribute to the overall business value.

Understanding the tools and applications of artificial intelligence contributes to better implementation in the work environment. Education can and should play a significant role in developing ethical awareness among employees. Artificial intelligence can have a significant impact on decisions within an organization. Thus, employees need to be aware of ethical issues that may arise, such as the transparency of algorithms, data privacy protection, and issues related to discrimination. Employee training is in the interest of companies because it saves resources by having already capable employees who can work with tools and applications in the development and implementation of artificial intelligence in business, thus eliminating the need to seek new labor. This aspect is crucial for increasing efficiency, developing innovations, and gaining a competitive advantage. If a company chose not to provide education, it would lose much of its workforce and would have to employ already educated and trained people who know how to use artificial intelligence, thereby reducing its resources. In this way, they gain insight into the importance of constant, continuous education to create successful implementation of artificial intelligence in their company. This encourages innovation and ensures the long-term success of business processes and the company itself.

10. DEVELOPING COMPETENCIES FOR WORKING WITH AI ALGORITHMS

Education for employees is inevitable in today's modern enterprises to work with artificial intelligence. Working with artificial intelligence requires specific knowledge and skills from employees, which organizations themselves need to provide. Companies should dedicate efforts to educate their employees so they can possess certain competencies. Employees must understand the basics and fundamental terms related to working with algorithms, whether in deep learning or machine learning. They should be able to recognize different types of algorithms, their advantages and disadvantages, and limitations, and through this, choose the best algorithm for problem-solving. Education should not only focus on the theoretical part but also on application in practice and real problems. To be prepared for this, employees must be trained to handle programming languages essential for the development of artificial intelligence. The most commonly used programming language is Python, along with TensorFlow, PyTorch, and Scikit-Learn. They provide tools for developing and applying machine learning algorithms. Knowledge of handling these tools eases employees' practical application of the theoretical part and their skills in actual problem-solving or projects. Another crucial point is the development of analytical skills, i.e., knowledge in analyzing data and its functionality for easier interpretation of the results obtained through artificial intelligence. After education, employees should be able to analyze data, identify patterns, and make decisions based on the results obtained from artificial intelligence algorithms. Developing analytical competencies contributes to the enhancement and advancement of business processes and the making of strategic decisions based on given data. Another inevitable segment in education is training on ethical and security rules when using artificial intelligence. This is also an important segment in competency development. Employees need to understand the challenges associated with transparency, data privacy, and ethical

codes that regulate working with artificial intelligence. This ensures a responsible and ethical application of artificial intelligence in business processes. If employees continuously progress and undergo training, they contribute not only to their own development but also to the overall success of the company.

11. IMPLEMENTATION OF AI IN SMALL AND MEDIUM-SIZED ENTERPRISES

The application of artificial intelligence in small and medium-sized enterprises is becoming an increasingly significant issue today due to the rapid development of artificial intelligence and other digital systems. Companies can achieve significant goals with the application of artificial intelligence if they know how to properly implement it in all business segments. The main reason for introducing artificial intelligence into businesses is the desire to improve performance. Automating daily tasks, analyzing large data sets, and enhancing processes can ultimately lead to cost reductions and increased productivity, allowing companies to enhance their resources and use them for other purposes. Customization and personalization of individual user experiences and providing tailored services are major advantages of introducing artificial intelligence into small and medium-sized enterprises. Through various analyses of customer behavior, artificial intelligence can adjust their products or services to their specific demands and criteria, which can ultimately increase the customer base. Artificial intelligence in marketing and sales can help companies better understand trends, analyze competition, and adjust their marketing strategies accordingly. Tools used in artificial intelligence enable better targeting of audiences, as well as advancements in marketing campaigns and advertising. Process enhancement can save resources and is a key element in the application of artificial intelligence in small and medium-sized enterprises. Decisions based on data processed by artificial intelligence can contribute to risk management, process improvement, resource enhancement, and long-term business process planning of the company. Despite the advantages, small and medium-sized enterprises face challenges in implementing artificial intelligence, such as reduced financial resources, a lack of trained workers, or the need to adjust their existing business processes. However, services based on cloud tools and various consultations help companies successfully implement artificial intelligence. The application of artificial intelligence in small and medium-sized enterprises aids in creating ideas, innovations, improving processes, and analyzing competitive advantages, contributing to the adaptation of their business processes that support company growth. The introduction of artificial intelligence is becoming increasingly important for small and medium-sized enterprises that want to survive and rise in the market today.

12. CHALLENGES AND ADVANTAGES OF IMPLEMENTING ARTIFICIAL INTELLIGENCE IN SMALL BUSINESSES

In the implementation of artificial intelligence, obstacles are found in both large and small companies that are just starting to grow. The application of artificial intelligence immediately brings a series of challenges, but it also offers various benefits. One of the

important segments is the financial budget, considering that small businesses have smaller and limited resources that they can invest in various tools and artificial intelligence systems. The application of artificial intelligence, training existing employees, and maintaining education to have trained staff can pose a significant obstacle for small businesses. They often face a lack of employees who are experts in artificial intelligence. Qualifying and retaining quality experts can be a significant challenge because it further complicates the implementation of artificial intelligence due to increased costs. Setting up and adapting artificial intelligence to the specific specifications of small businesses can be very complicated. However, despite these challenges, the application of artificial intelligence in small businesses carries significant features. Process automation can result in reduced labor costs and increased efficiency, which is crucial for small businesses that have limited resources. Analysis tools based on artificial intelligence enable a better understanding of the market, customer preferences, and thus the enhancement of marketing strategies. Increasing competitive advantage is one of the key features of applying artificial intelligence in small businesses. Products or services can be individualized and personalized, which would contribute to better decision-making based on analytical data and allow small businesses to adapt to the market and competition. This could be achieved much faster with artificial intelligence than it could be without its use. Such data analysis enables the discovery of new business opportunities and ideas, process improvement, and better utilization and expenditure of resources. As a result, this can lead to the long-term growth and sustainability of the company. Challenges will be present daily and various difficulties will arise, but the application of artificial intelligence, especially in small businesses, will certainly contribute and surpass all these problems. Gradual implementation, financial alignment, and employee focus are essential steps for success and exploiting the full potential of artificial intelligence in small businesses.

13. ADAPTING BUSINESS MODELS OF SMALL AND MEDIUM ENTERPRISES WITH THE HELP OF ARTIFICIAL INTELLIGENCE

Small and medium enterprises must properly and effectively adapt their business models with the help of artificial intelligence to fully leverage their resources and rise above the competition. Artificial intelligence provides various tools and applications that can enhance business strategies, and a key step in adapting business models of small and medium enterprises with artificial intelligence is providing individualized and personalized advertisements, as well as products or services. Analyzing data left by customers in the form of reviews or comments enables the creation of customized offers, ultimately aiming to increase customer satisfaction and the likelihood that the customer will maintain their loyalty and continue purchasing a particular service or product. Artificial intelligence also tracks consumer trends and preferences in the market, allowing small and medium enterprises to respond to changes and thereby adapt their product or service offerings. Another crucial segment in the use of artificial intelligence in small and medium enterprises is process automation. Artificial intelligence has tools that can take over daily tasks, thereby automatically reducing the number of errors that humans could cause and thus increasing efficiency. This

segment is particularly important for small and medium enterprises that often have limited financial resources, thereby freeing up the workforce to focus on analyses and other activities. The application of artificial intelligence in a company's marketing strategy enables more precise determination of preferences and an increase in customers. Analysis tools provide a better and deeper understanding of the market, ultimately resulting in better advertisements and marketing campaigns because they know exactly the preferences of potential customers. Adapting all business models of small and medium enterprises with the help of artificial intelligence aims to increase activity, provide greater opportunities for employee training, and thus they have an already employed workforce and do not need to look for new. Such strategies are procedures that contribute to the sustainability of the business and its growth. Exploiting the full potential of artificial intelligence means not only following development trends but also implementing them in different segments of the business to achieve advantages over the competition.

14. RISKS ASSOCIATED WITH THE USE OF ARTIFICIAL INTELLIGENCE

Artificial intelligence brings numerous advantages and risks, but there are several segments with which one must become acquainted. One of the risk segments is inaccuracy, which is a risk with humans as well because we can never be entirely certain that a segment has been executed reliably. Artificial intelligence algorithms can be more precise than humans, but they can also be inaccurate or carry biases if trained on such data sets, thus leading to biased decisions. It is crucial to regularly update algorithms, use larger data sets, and apply techniques to detect and mitigate risks. Privacy and data protection can be compromised if large amounts of various data are used for training, which can jeopardize the privacy of the users. Implementing privacy protection can resolve issues, as well as techniques that occupy data, thereby enabling users to control their own data. Artificial intelligence systems can also be compromised due to hacking attacks, security systems can allow access to various undesirable elements, thus jeopardizing security which can have serious consequences. Therefore, it is crucial to constantly update and implement security measures, and apply mechanisms that detect new and unusual activities to remove threats at the outset. Protecting and securing artificial intelligence and automation processes is necessary, but it is also essential to educate staff on how to deal with the problem. If most processes from various segments depend on artificial intelligence and there is a failure, the process will not be feasible due to the large number of processes dependent on artificial intelligence. It is therefore necessary to develop plans and adhere to them to ensure the application of good practices, risk management, and the development of alternative strategies as solutions to problems. Automation with artificial intelligence can also lead to job losses, either because an employee refuses to undergo training or because the company has found a more qualified worker who will perform the job correctly. Setting up ethical rules for the use of artificial intelligence can be problematic. It is necessary to develop good ethical guidelines and educate employees regarding ethical codes, but also to ensure transparency in algorithms so as not to violate rules. Artificial intelligence is a very complex model, but it can still lack

transparency in decision-making. This can be resolved by applying tools for explaining and warning about algorithmic decisions which support transparency in artificial intelligence. As for legal uncertainties, the lack of clear and good regulatory guidelines and standards can create ambiguities and problems. Constant participation in the development of appropriate regulations, cooperation with regulatory bodies, and adaptation to new legal challenges are necessary. All these segments can help in resolving emerging problems. Potential risk includes the development of super artificial intelligence that could have capabilities greater and more superior than human. The solution to such a problem in such a risk is to monitor capabilities and research of artificial intelligence. Acting according to standards and cooperating with regulatory bodies is the solution to potential risks. All these segments contribute to good management of business processes in a company. As for the risks, they are very similar in most segments of the business. Algorithms can be inaccurate or carry biases if trained on incorrect data containing social biases. Using large amounts of data for market analysis can endanger consumer privacy. AI systems are potential targets for hacking attacks that can compromise data security. Over-dependence on AI technologies can result in difficulties in case of technical issues, malfunctions, or system failures. Setting ethical guidelines for the use of AI in market analysis can be challenging. The complexity of AI algorithms can result in a lack of transparency in decision-making. Automation through AI can lead to a reduction in human interaction in market analysis. The legal framework for using AI in market analysis can be unclear or insufficiently defined. Automated AI decision-making processes can result in situations where it is unclear who is responsible for making decisions. Market analysis using AI may involve collecting and using data in ways that are not fully in accordance with ethical standards.

15. THE IMPACT OF GLOBAL TRENDS ON SHAPING LOCAL APPROACHES TO ARTIFICIAL INTELLIGENCE

Various global trends significantly influence enterprises that implement artificial intelligence in their operations. Artificial intelligence is still globally researched due to its application and development, and various companies are trying to adapt to this advancement. They are developing necessary skills and adopting technologies to meet the conditions of artificial intelligence development. The adaptation of artificial intelligence at the local level stems from cultural, legislative, and economic differences between countries. Data privacy laws, as well as ethical and cultural standards, are a significant part where artificial intelligence is applied, therefore companies must conduct continuous employee training to keep up with innovations. Laws and regulations in each country are individual and differ due to various types of regulations. Some countries have stricter regulations regarding data privacy, which requires special approaches to the application of artificial intelligence to ensure compliance with specific regulations. Various global trends also affect local levels and their strategies. Companies continuously monitor various global successes, as well as failures in the application of artificial intelligence, and thus can adapt to improve their approaches and meet the specific needs of the local market. For example, the

application of artificial intelligence in online trading can have special requirements for adapting strategies, depending on cultural preferences and consumption analyses in a particular area. With the advancement of global cooperation and increasing availability of technology, local communities can more quickly adopt new technologies and improve operations by applying artificial intelligence. This type of business enables faster implementation of innovations in local sectors and contributes to economic and competitive growth. In education and training, global trends play a significant role due to the application of artificial intelligence, which is constantly changing on a global scale. Companies recognize the importance of further developing their employees due to the development of artificial intelligence. Global trends in artificial intelligence have a significant impact on both global and local approaches by determining the type of technology application that will be used at the local level. Global diversity of regulations and laws, needs, ethical and cultural factors make it necessary to adapt global trends to achieve good implementation of artificial intelligence at the local level.

CONCLUSION

The application of artificial intelligence is key to the success of every modern organizational business due to various innovative approaches to business strategies, market analysis, and business plan development. This paper has presented different types of aspects of artificial intelligence application, primarily in business contexts, from basic concepts and historical development to different methods of using artificial intelligence in business. By analyzing the application of artificial intelligence in enterprises, we have observed significant changes in business strategies, organizational work structure, and in the processes of market analysis and business plan creation due to daily technological innovations. The traditional digital approach significantly differs in all segments and work structure, and we can see how the digital approach assists companies in their development. It is always good to retain a part of the traditional approach along with the application of digitalization due to unforeseen failures or errors in the application of artificial intelligence in enterprises. With the digital approach, companies can more quickly and easily adapt to market changes and remain competitive. The work structure of an enterprise organization changes with the digital approach, but on the other hand, employees receive necessary education and a different level of job placement, which is important for market analysis and adapting the business plan with the aim of making correct and quick decisions. Artificial intelligence has numerous advantages, but it also brings certain risks that must not be ignored but should be constantly addressed. When a company learns to manage these risks, it aims for sustainable success in the application of artificial intelligence. Artificial intelligence, through various analyses of results, has numerous advantages, but also requires monitoring, adaptations, and transparency during its use. In conclusion, this work requires ongoing research, adoption of artificial intelligence knowledge, and risk monitoring due to the continuous development of technologies to ensure general and business success.

REFERENCES

1. B. Marr, M. Ward: *Artificial Intelligence in Practice*, Mate d.o.o., Zagreb, 2022.
2. I. Koprek and colleagues: *Artificial Intelligence, Economy, and Business Ethics*, Faculty of Philosophy and Religious Sciences, Zagreb, 2022.
3. M. Manestar: *Analysis of the Application of Artificial Intelligence in Business Operations Using the Case Study Method*, Master's Thesis, University of Zagreb, Faculty of Economics, Zagreb, 2021.
4. T.H. Davenport: *The Advantage of Artificial Intelligence*, Mate d.o.o., Zagreb, 2021.
5. S. Crnčić: *Artificial Intelligence in Business*, Master's Thesis, University North, Varaždin, 2020.
6. D. Šokec: *Digital Transformation and Traditional Models of Organizational Changes*, Final Paper, University of Zagreb, Faculty of Organization and Informatics, Varaždin, 2022.
7. K. Brekalo: *Three Contemporary Trends in Organizational Design - Digital Transformation, Virtual Connectivity, and Agility*, Final Paper, Juraj Dobrila University of Pula, Pula, 2021.
8. L. Lovrić: *Organizational Structures*, Specialist Graduate Professional Study, University of Split, University Department of Professional Studies, Split, 2021.
9. D. Sokač: *Integration of Information Systems and the Internet of Things*, Master's Thesis, University of Zagreb, Faculty of Organization and Informatics, Varaždin, 2018.
10. A. Babić: *Employee Education as the Foundation of Business Success*, Master's Thesis, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, 2022.
11. L. Javorović: *Responsible Development and Application of Artificial Intelligence*, Final Paper, Josip Juraj Strossmayer University of Osijek, Faculty of Philosophy, Osijek, 2022.
12. Center for Small and Medium Enterprises and Entrepreneurship Policy Development (2016) *Report on Small and Medium Enterprises in Croatia*, Zagreb, CEPOR, 2013.
13. Lj. Vidučić: *Small Economy - Limitations and Assumptions for Development*, in Vidučić, Lj. (ed) *Small and Medium Enterprises: Financial Policy and Economic-Financial Framework of Support*, University of Split, Faculty of Economics, pp. 3-12, 2012.
14. <https://www.umjetnainteligencijai.com/primjene-umjetne-inteligencije/>, accessed January 15, 2024.
15. <https://www.enciklopedija.hr/natuknica.aspx?ID=63150>, accessed January 15, 2024.