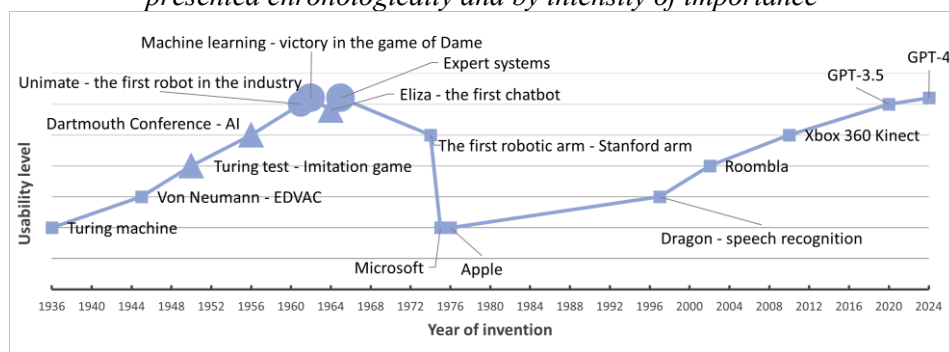


Chapter 22.

ARTIFICIAL INTELLIGENCE SUPPORT FOR POLICYHOLDERS

Artificial intelligence, as a scientific field, is less than a century old. The idea and vision of creating beings or systems that mimic what nature has been creating for millions of years is much older. The study of human brain patterns and the formalization of thinking and reasoning have inspired Egyptian engineers, Greek philosophers, and science fiction writers. Nevertheless, the point from which this very important period in the development of humanity begins is the Universal Turing Machine, the concept of which was presented in 1937. A few years later, in 1956, at Dartmouth College in America, this area received its official name. A group of already experienced researchers in this field organized a conference where the previous achievements and future directions of development were discussed. At the suggestion of American scientist John McCarthy, winner of the Turing Award and creator of the LISP programming language, the field was named Artificial Intelligence (AI).

Figure 1. The most important events in the development of artificial intelligence presented chronologically and by intensity of importance



Source: Author's research

The history of the development of this field does not have continuous growth, but is very dynamic, from great successes and strong enthusiasm in certain decades to a period with great skepticism and almost halting development. Sometimes the reasons are technical limitations and sometimes political and economic conditions. Figure 1 presents the most important events in the short history of AI. Squares represent innovations or projects that were the drivers and basis for a series of other innovations, triangles are innovations that

remained at the level of prototypes or models for practice and further upgrading. Circles represent AI innovations that have seen practical application.

Everything starts with a theoretical concept in 1936-1937 when an abstract computing machine was presented that consisted of unlimited memory and a scanner that moved back and forth through the memory, symbol by symbol, reading what it found and then writing down further symbols. The scanner's actions were dictated by a program of instructions that were also stored in memory in the form of symbols. This is Turing's concept of the stored program, whereby the machine had the ability to run on its own program and thus modify and improve it, which is now known as the Universal Turing Machine.¹

Unlike traditional Natural Language Processor (NLP) models that rely on hand-crafted rules and hand-marked patterns, Large Language Models (LLM)² process huge amounts of textual data and establish relationships between words in the text. These models have advanced over the past few years thanks to advances in computing power. LLMs improve their ability as the size of their input datasets and training algorithms increases. Machine learning is responsible for training algorithms. Machine learning is by far the most developed and widely used model of artificial intelligence. It is intended to develop systems that improve their performance with experience. Typically, a combination of unsupervised, supervised, and reinforcement learning is used throughout the development phases of a new robot. The most advanced branch of machine learning is deep learning. Deep learning involves the creation of neural networks, inspired by the biological neurons in our brain. By structuring algorithms in layers, this model creates an artificial neural network that can learn by itself and make intelligent decisions. Deep learning combined with Big Data is the driving force for many applications in artificial intelligence such as object recognition, speech, natural language processing, etc.

The main star of the current period is ChatGPT. In June 2020, the third version of the GPT algorithm, GPT-3, was released. It's a model that uses deep learning to create code, poetry, and other similar language and writing tasks. This version was free to use and gained popularity at an incredible speed. This was followed by the GPT-4 version, additionally improved, which, among other things, has up-to-date information, which the previous version did not have. While not the first of its kind, it is the first to create content that is almost

¹ <https://www.britannica.com/biography/Alan-Turing/Computer-designer>

² Menor D. (2023). *Veliki jezički modeli: sve što trebate znati*.
<https://hashdork.com/bs/veliki-jezički-modeli>

indistinguishable from human-generated content. It gained its incredible popularity through applications such as chatbots, translators and other programs that use natural language. The key thing about this technology is, apart from quality, easy availability and ease of use.

Given that AI has become an active component of everyday life and is faster and more accurate than humans in many things, the question of ethical application arises. Important figures in the AI of our age, such as Elon Musk, Stephen Hawking, Steve Wozniak and over 3,000 others, have signed an open letter to all world governments prohibiting the development and subsequent use of autonomous weapons for purposes of war.

However, there are still experts in the field who are so concerned about the future of AI that they even demand a moratorium on the further development of GPT. Max Tegmark,³ physicist and artificial intelligence researcher at MIT, author of the book *Life 3.0*, works intensively to raise awareness among people regarding the consequences that AI can have on humanity if it is developed and implemented unethically or insufficiently carefully. Tegmark believes that life 3.0 has not yet been created and implies a life that, in addition to being able to change its software, will have the ability to recreate hardware as well. He also claims: "Most politicians don't even have this on their radar. They think maybe in 100 years or whatever. Right now, we're at a fork in the road. This is the most important fork humanity has reached in its over 100,000 years on this planet. We're building effectively a new species that's smarter than us."⁴

Has any AI machine passed the Turing Test?

The Turing Test is a measure of a machine's ability to exhibit intelligent behavior that is indistinguishable from that of a human. In this test, a human evaluator interacts with both a machine and a human through a computer interface. If the evaluator cannot reliably distinguish between machine and human responses, then the machine is said to have passed the test and demonstrated human-like intelligence. The Turing Test was a fundamental concept in the philosophy of artificial intelligence and its potential capabilities.

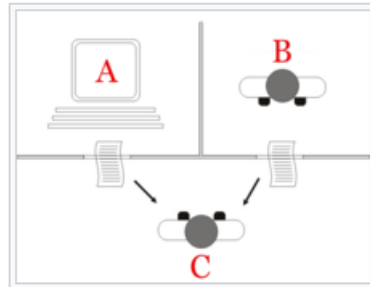
To test the machine's intelligence, a human (hidden entity C) would communicate with the machine (A) or another human entity (B) via text

³ <https://youtu.be/VcVfceTsD0A>

⁴ Tegmark, M. (2020). *Život 3.0: kako biti čovek u doba veštačke inteligencije*. Laguna. Beograd

messages. Figure 2 shows a Turing test taking place in a controlled environment, where a hidden human entity B, an AI machine A, and an average human examiner C are unaware of each other's identities.

Figure 2. The Turing test



Source: https://sr.wikipedia.org/sr-el/Turingov_test

Assessors (C) sitting in another room conduct the interviews and have five minutes of interrogation to determine which messages are coming from the machine and which are from human. If a machine can fool 30% of human examiners, it is considered to have passed the Turing Test.

While the Turing Test may seem simple, it encompasses a lot of complexities that an AI system must navigate: natural language processing, context awareness, and even elements of emotional intelligence. Moreover, the test challenges the underlying algorithms to understand idiomatic expressions, sarcasm and rhetorical questions, as well as the nuances inherent in human communication. Over the years, the Turing Test has been criticized as an inadequate measure of all forms of intelligence. Critics argue that passing the Turing Test may require mere mimicry of human reactions rather than deep understanding or awareness. Nonetheless, it remains an influential benchmark in the AI community due to its emphasis on indistinguishable human-machine interaction. It is also important to remember that the Turing test does not cover all representations of the concept of intelligence. For example, a certain machine might beat a human at chess, but it wouldn't be able to pass a five-minute test.

Two researchers from the University of San Diego's Department of Cognitive Sciences published a paper titled "People cannot distinguish GPT-4 from a human in a Turing test"⁵ describing a Turing Test conducted where GPT passed

⁵ Jones, C. Bergen, B. (2024). *People cannot distinguish GPT-4 from a human in a Turing test*. Cornell University.

with an unexpectedly high score. This is why ChatGPT is a prime candidate for the implementation of artificial intelligence in the field of insurance customer support.

In early 2025, Chinese AI startup DeepSeek caught the world's attention with its free AI chatbot, which looks and works very similar to ChatGPT. The company DeepSeek claims that they managed to build a product equal to ChatGPT-4 with an incomparably lower budget than the one announced by Sam Altman, head of OpenAI. In addition, this application uses less memory than its rivals, which ultimately reduces resource consumption on the user side. That combination of performance and lower price helped DeepSeek's AI assistant become the most downloaded free app in Apple's App Store when it was released in America. Like previous Chinese AI models, DeepSeek is trained to avoid politically sensitive issues.

It is expected that the adaptation of AI in Europe can significantly contribute to the growth of the industry that has the greatest scope for development or the greatest costs. The assessment is that the greatest potential is in consumer goods trade, followed by construction, transport and advanced manufacturing. Significantly smaller, but still visible, is the impact on insurance, telecommunications and agriculture.

1. HOW CAN AI HELP INSURANCE COMPANY CUSTOMERS?

Insurance company clients as natural persons, can get better information, faster and simpler processes, lower costs and better protection thanks to artificial intelligence, while improving their everyday insurance experience. Artificial intelligence can indirectly help insurance company customers in a number of ways through improving the insurance company's service by incorporating AI.

Personalized risk advice and recommendations for choosing the right cover can be provided by AI based on the analysis of user data (e.g. demographic information, lifestyle, driving habits) and suggest the policy that best suits their needs. Also, policyholders can receive recommendations, such as the introduction of safety measures in houses, apartments and premises where they have their own small business, as well as advice on safer driving.

Faster and simpler processing of claims by speeding up the process and reducing paperwork can be achieved by introducing artificial intelligence into the processing of documentation from the claim report and images (e.g. vehicle damage) in real time. In this way, clients no longer have to wait a long time for

the approval of claims for compensation. Also, AI can help the injured party by automatically filling out the forms used in the claims report based on previous entries, thus saving time.

Smart assistants and chatbots increase the availability and accessibility of the insurance company outside of working hours. Virtual assistants using artificial intelligence, such as ChatGPT, can provide answers to frequently asked questions at any time and help users understand their policies, submit claims or find out all the details about possible coverages. These tools facilitate communication even for users who do not know the technical terms of the insurance field or are not familiar with the processes of insurance companies.

Prevention of problems by health status monitoring and proactive support by sending alerts can be provided thanks to useful notifications, from a system supported by artificial intelligence, that policyholders can receive in real time. It can be e.g. warning of severe weather that could threaten their property, with advice on precautionary measures. AI connected to wearable devices can alert users to changes in health parameters and suggest immediate measures to eliminate potential health hazards, while aligning the renewal policy with their health status.

Easier and more cost-effective insurance policy management with AI-powered applications where policyholders can easily update their details, track the status of their claims and renew policies through simple AI digital platforms. Also, such applications can analyze current customer policies and suggest ways to reduce costs and improve coverage adequacy, e.g. by switching to a different insurance package.

Reducing insurance costs by introducing dynamic policy pricing and rewards for less risky behavior can be achieved by letting AI adjust insurance prices based on customer behavior, such as driving safely or adopting recommended risk reduction measures. Also, the insurance company can introduce discounts for customers who, for example, drive carefully or maintain their property according to the advice of the AI system.

Greater policy transparency and personalized education can be achieved by AI by explaining complex aspects of policies to policyholders in plain language. Clients thus receive customized guides to understand their rights and obligations in relation to insurance.

2. HOW CAN AI HELP BROKERS HELP POLICYHOLDERS?

Brokers in their daily work collect a large amount of structured and unstructured data about risks, policies, claims, etc. Management of images, documents printed from various information systems, handwritten documents, scanned documents, filled electronic forms, etc. is very demanding and time-consuming for brokers. Artificial intelligence can simplify a broker's complex operations in a number of ways.⁶

Efficient data extraction and management using AI tools that use technologies like optical character recognition (OCR) and natural language processing (NLP) to collect data from a variety of sources, including website forms, customer conversations, email and social media posts. After collecting data, AI helps organize its storage and easier access to this data, allowing brokers to efficiently manage large amounts of information.

Continuous product improvement using machine learning and advanced algorithms. AI enables brokers to understand customer behavior and preferences, leading to personalization of insurance policies. Also, by gathering feedback and analyzing the market, AI identifies operational obstacles and product limitations, driving continuous service improvement.

Risk detection and mitigation using AI systems that analyze data from a variety of sources, including demographic information, claim history and external factors like economic conditions and weather patterns, to identify potential risks before they become a real insurance problem. These predictive models help brokers come up with risk mitigation strategies, such as dynamic policy pricing.

Building customer relationships by automating data storage and analysis. So, AI allows brokers to focus on building personal relationships with clients. AI tools improve transparency and personalization of services, leading to greater customer satisfaction and loyalty.

Improving fraud detection and claims processing using AI technologies, including machine learning, which can analyze patterns of behavior and identify suspicious activity, improving fraud detection. Also, automating the claim settlement process reduces processing time and increases accuracy, which contributes to the efficiency of operations.

⁶ Open GI. (2024). *Three Ways AI Can, and is, Transforming Broking*.
<https://opengi.co.uk/blog/three-ways-ai-can-and-is-transforming-broking>

Artificial intelligence is already part of insurers' information systems using big data and algorithms, as it enables them to automate risk underwriting, claims decisions and improved business processes. An increasing number of underwriting decisions are being automated, so the new role of the broker is to negotiate with the insurance company on behalf of the client, in case the computer rejects his request.⁷ Brokers can supplement the data collected by AI by adding layers of data that are not readily available such as business culture and its approach to risk management.

There is a risk for brokers that automation and big data could marginalize brokers dealing with specific types of products, as is already happening in the home insurance and travel insurance markets. The introduction of autonomous vehicles could fundamentally change car insurance. Safer AI-driven driving in autonomous vehicles could lead to lower premiums and lower claims, reducing the overall premium income generated by the sector and thus the commission to brokers. Advances in the Internet of Things will have an impact on health insurance as it leverages data obtained from wearable technology, connected personal devices and technology in the home.

It is possible that these technological advances will bring risk to brokers in the commercial insurance sector, where brokers are traditionally more represented. Since people behavior are one of the biggest risk factors in insurance, the introduction of smart manufacturing processes and monitored inventory warehouses could reduce human errors in factories and warehouses and reduce premiums accordingly.

The application of artificial intelligence allows insurance brokers to streamline operations, increase efficiency and improve the customer experience. Using insurance software solutions with elements of artificial intelligence makes the insurance industry more accessible to customers. A combination of advantages such as efficient data management, continuous improvement of products and services, proactive detection and mitigation of risks, as well as building relationships with clients, will accelerate the growth of the broker's business. Also, brokers will more easily perform their roles without feeling overwhelmed by numerous administrative activities. However, brokers will face the challenge of keeping up with technological advances, adopting new knowledge and techniques for risk management. Finally, brokers may be under additional pressure to prove their value in the insurance distribution chain.

⁷ Jenkin, A. (2018). *Artificial Intelligence and Insurance Broking*. Russell Scanlan, Nottingham's insurance broker. <https://www.russellscanlan.com/blog/artificial-intelligence-and-insurance-broking>

3. CHALLENGES THAT AI PRESENTS TO THE CONCEPT OF INSURANCE

Insurance works by pooling the risks of similar independent units of exposure, which allows insurers to use the law of large numbers in a variety of ways. New technologies can help answer the question of whether there are enough similar units to cover. In the simplest case where the law of large numbers applies, it is assumed that the risks are similar and independent of each other. In reality, this is often not the case because it is difficult to find identical risks, that is, most often the risks are just similar and then different insurance prices correspond to them. Also, risk independence is not complete. AI can be valuable in verifying the mutual independence of risks. All entities nowadays are increasingly networked, which means that a risk that materializes somewhere can cause widespread collateral damage in other parts of the networked world. This phenomenon is not only related to cyber risks, although they are certainly a central theme in the risks that spread in computer networks. In the years to come, insurers will have to deal with the increasing dependence between different risks. AI will be a tool to help insurers understand such risk interdependencies. AI risk analysis tools significantly reduce the imprecision of adverse event probabilities, but even when probabilities are more accurately predicted, outcomes are still stochastic. This can be used to calculate the risk-based premium individually for each individual risk.

Claim is by definition a loss that occurs at a known time, in a known place, and from a known cause. The key elements in predicting an insurance claim are the probability of occurrence and the cost of the claim. Insurers' appetite is generally greater for cases that have less forecast error, as this results in better portfolio management, more accurate pricing and easier claims handling. The occurrence of an event depends on how the event is defined and how it is covered. Probability of loss is generally an empirical exercise and deals with the problem of predicting the occurrence of loss with sufficient accuracy. The cost of claim determines the insured loss, that is, the ability of the insurer to make an objective assessment of the amount of compensable loss that occurs as a result of the claim of the person who owns the insurance policy and has proof of the loss covered by that policy. New technologies can reduce prediction error and thus increase insurance coverage. Innovative solutions, such as the collection of large amounts of data, the application of the Internet of Things and artificial intelligence methods, help to improve the prediction of claims and add value to actuarial pricing methods. The insured event that causes claims should be an accidental loss in an event beyond the control of the insured. New technologies

do not fundamentally change this scenario. Another thing to note is that, traditionally, the insured has an advantage over the insurer in terms of knowing the own risk. This balance could change, as AI and big data will give insurers better tools to estimate the likelihood of occurrence and magnitude of loss. Insurance premiums should cover not only the expected costs of the claims, but also the costs of issuing and administering the policies, claims settlement, the costs of capital of the insurance company, and finally provide a dividend to the insurance company's shareholders.

Insurers mainly deal with the following risks, which are characterized by different frequency and severity of events:

- high frequency of small losses and
- low frequency of large losses.

The frequency of events has a significant impact on the predictability of losses, and subsequently on the level of expected losses and compensation for capital or risk. Again, in this area new technologies can improve insurance by making valuations better. Although AI could be useful for looking at low-frequency, high-loss events, the high economic value of the resources involved means that very precise risk analysis and underwriting is already possible in this area. Thus, AI can be expected to have a far greater impact on the risk of high frequency of small losses. In this area, overheads arising from various claims administration tasks can effectively render risks uninsured. AI and related new technologies have the potential to increase the efficiency of insurers' processes. In a competitive market this should lead to lower premiums for insuring the risk of high frequency of small losses in practice. A risk is insured only if the insurer can charge an affordable premium from the client's point of view. If the probability of an insured event occurring is so high, or the cost of the event so significant that the premium is disproportionately large in relation to the amount of protection offered, it is unlikely that anyone will buy insurance unless legally required to do so.

Insurance can be threatened by issues such as adverse selection, moral hazard, and insurance fraud.

Anti selection describes a group that is populated with a higher average level of risk than was predicted when the insurance product was designed. This can happen because less risky policyholders leave the company when they feel the premiums are unreasonably high for their risks and only high risk policyholders remain. Adverse selection can occur in a situation where the prices are correct, but the market conditions are not favorable, i.e. another insurer offers lower prices due to different risk segmentation or when potential clients decide not to take insurance at all. New technologies can help the insurer avoid adverse

selection with the help of improved tools that lead to better risk differentiation and then set premiums that match the actual risk. Pricing accuracy reduces the danger that only bad risks will remain in insurance. However, it should be added that AI may ultimately favor platforms that increase the possibility of adverse selection, as such systems can monitor the offer of different insurers in real time and select the best offer for each client. This can lead to a situation where the insurer's portfolio is grouped with higher risks than expected. Initiatives such as Open Finance and Open Insurance should also be seen in this context.

Moral hazard describes the scenario of the policyholder's behavior becoming less cautious towards the risk for which there is coverage. New technologies are likely to improve the tools an insurer has at hand to control moral hazard.

Insurance fraud differs from moral hazard in that it refers to the intentional actions of the insured, which were done with the aim of obtaining an illegal benefit at the expense of the insurance company. New AI tools can help a lot in the fight against insurance fraud. At the same time, it should be emphasized that new technologies can also be of great benefit to those who want to commit insurance fraud. Criminals can develop effective automated systems based on artificial intelligence to commit insurance fraud against insurers.

Finally, it should be understood that insurance is not a static concept that remains the same over time. Insurers have developed a range of solutions to adapt insurance techniques to meet different challenges. AI can be used in loss prevention to limit risks to a tolerable level. Insurers can use AI systems to inform their customers about how to protect themselves against the risks that are realized. This will be especially true in the world of the Internet of Things, where continuous preventive behavior will be possible. Adjustments to terms can also play a role in this, as for example deductibles can combat moral hazard, while coverage limits can transform unquantifiable underlying risks into known maximum exposures.

When the commercial insurance market fails to provide coverage for a critical risk, private-public partnerships are established.

4. EXAMPLES OF THE USE OF AI FOR CUSTOMER SUPPORT IN INSURANCE AROUND THE WORLD

AI is helping the insurance industry make optimal use of vast amounts of data. Insurers are using artificial intelligence to create individualized policies,

automate underwriting processes and provide valuations with greater accuracy to clients around the world. Insureds especially benefit from shopping with aggregators that compare coverage and prices from various insurers, fast claims processing, 24/7 insurance service and improved decision management.

Reducing price bias

Arity⁸ is an Insurtech company that processes and analyzes data in the transportation industry. The company was founded by a large American insurance company, The Allstate Corporation, in 2016. It collects and analyzes massive amounts of data, using predictive analytics with the goal of making transportation smarter, safer, and more useful for everyone. Artificial intelligence analyzes trillions of miles of driver data, looking for results that can be used to improve safety e.g. through usage-based auto insurance programs, which allow drivers to pay a premium commensurate with the amount and level of safety of their driving.

Assessment of damage to the vehicle

Major American insurance company Liberty Mutual is exploring artificial intelligence through its Solaria Labs⁹ initiative, a cross-functional team that develops new advanced products and services to better serve customers and partners. The result of Solaria Labs' experimentation in the fields of computer vision and natural language processing is the AI tool Auto Damage Estimator. By conducting comparative analyzes of anonymous claim photos, this AI tool is able to quickly assess vehicle damage and provide the injured party with a realistic estimate of the time and cost of repairing the vehicle after an accident.

Real-time customer service representative training

Hi Marley¹⁰ is a platform purpose-built for the insurance industry, to make it easier for policyholders to reach the right insurance company representatives, reducing communication inefficiencies. Hi Marley uses a cloud platform equipped with AI features to ensure that customer service representatives work as quickly as possible. For example, Hi Marley's platform translates text into different languages to adapt to the customer and provides real-time training to contact center operators to improve interactions with policyholders.

⁸ <https://arity.com>

⁹ <https://www.solarialabs.com>

¹⁰ <https://www.himarley.com>

Matching customers with the best customer service representatives

Affinity¹¹ is a leading provider of artificial intelligence that helps insurers develop better relationships with their customers. It uses patented AI technology to match participants in customer interactions. Improves the quality of customer conversations by matching callers with customer service representatives based on best fit, not call order. With access to vast data, the company's AI technology determines patterns of human behavior and matches contact center operators with callers based on that. By pairing people who communicate more easily with each other, insurance companies have the ability to form stronger relationships with clients.

Communicating with customers in different languages

Avaamo¹² is an advanced generative AI platform that enables global enterprises to automate and deliver outstanding customer communication experiences. Their AI technology includes voice transcription, natural language understanding and generative artificial intelligence. It supports self-service customer service interactions for leading global companies in 114 languages. Avaamo seamlessly integrates with many common business applications and simplifies processes for insurance providers. Insurance providers with a broad customer base can rely on Avaamo to reduce the time it takes to create quotes, submit claims and underwrite policies for customers from different parts of the world.

5. POSSIBILITIES OF APPLYING ARTIFICIAL INTELLIGENCE IN INSURANCE IN SERBIA

Insurance companies, similar to other companies, in our area are not yet ready to accept advanced work techniques using artificial intelligence on a larger scale, despite claims that they would reduce costs, save time and solve the issue of labor shortages. Last year was marked by the appearance of the first easily accessible and very useful tool that uses the artificial intelligence of ChatGPT. Apart from being a valuable help in various tasks that employees deal with, there have not been many organized implementations of ChatGPT in business processes in our market.

¹¹ <https://www.afiniti.com>

¹² <https://avaamo.ai>

A survey by the American company IDC, which is a leading global market researcher, data analyst and organizer of events in the world information technology market, conducted in April 2024, showed that only 12.5% of started IT projects using artificial intelligence in the previous year were completed. It remained unclear, which part of such a small number of completed projects was really successful from the business perspective of the companies that implemented them.

The introduction of artificial intelligence in the company makes sense only if the following conditions are met: processes are organized with detailed procedures, data is digitized to the level that what is not entered into the information system does not exist, and all business processes are maximally automated. Only then artificial intelligence achieves best results. Unfortunately, all these conditions are rarely met in our companies. Estimates are that only about half of the companies in Serbia are significantly digitized, which means that a large number of companies should first invest effort in the process of digitization and automation, and then move on to advanced techniques such as artificial intelligence. Company data is often poorly organized on servers and often not in a form that artificial intelligence can exploit. However, investment in data management more often goes to IT security and personal data protection due to strict regulations, than to transforming data to work with AI and increasing data quality, which further slows down the future implementation of artificial intelligence. As a rule, training of artificial intelligence models is done in the most common languages such as English, while the Serbian language, as well as other languages that do not use the Latin alphabet, are less often used for training these models, so the results achieved by AI in such languages are significantly less reliable.

The successful implementation of artificial intelligence requires a strategic approach: a high-quality expert team, a detailed policy for the use of AI tools, and enabling a large number of employees to attend AI courses in order to become familiar with this field. Very few companies in this region have adopted their own strategy for the development of artificial intelligence in business processes, among other things, because this technology is developing quickly and it is difficult to plan, when you do not know what will be current in the AI world next year.

In addition to the unreadiness of our companies to implement AI projects, there are also objective circumstances that make implementation difficult.¹³ Few

¹³ Dowd, A. (2024). *The Impact of AI on the Role of the CIO*. IDC CIO Summit presentation, Savudrija, Croatia.

developers know how to work in this area. The costs of implementation are high, which leads to high prices and the unprofitability of these projects, that is, the inaccessibility of AI projects to a large number of companies. The IT infrastructure in companies that want to implement artificial intelligence often cannot support the desired performance of the future AI system. Coordination between business and IT in companies is often not at a high enough level, so it is not possible to overcome misunderstandings in complex projects where AI is used. Also, members of the top management responsible for IT often have other priorities: the digital transformation of the company, the modernization of the IT environment with the aim of meeting the growing demands of the business, the management of IT risks and often the most important optimization of IT costs. These priorities simply prevent IT decision-makers from dealing with artificial intelligence.

6. APPLYING AI TO HELP UNDERSTAND INSURANCE PRODUCTS AND COVERAGE USING ChatGPT AS AN EXAMPLE

ChatGPT can provide significant assistance in understanding insurance products and coverage. The following examples show how ChatGPT has helped in specific situations. Some answers are partially shortened to save space in the work.

Explanation of basic terms and types of insurance

ChatGPT helps in understanding basic concepts like premium, coverage, deductible, policy, risk and more. Can accurately explain the difference between different types of insurance and different products of the same type of insurance. To begin with, he was asked a question to which not many people know the answer, but it is easy to find the answer on Internet search engines.

Question: "Why is the amount of money that the insured pays to the insurer in exchange for risk coverage called a premium"

ChatGPT's response: "The term 'premium' in the context of insurance comes from the Latin word *praemium*, which means 'reward' or 'payment in advance for a service'. In the context of insurance, a premium refers to an amount paid by the insured to the insurer as consideration for assuming the risk and providing the insurance protection. Thus, the name 'premium' emphasizes the specific nature of this payment - a pre-agreed amount by which the insurer is compensated for providing the protection and assuming the risk."

After the correct answer from the theory, a practical question was asked about a product of a specific insurance company.

Question: "What is covered by the insurance policy My warm nest Globos insurance company from Belgrade"

ChatGPT's answer: "The 'My Warm Nest' insurance policy from Globos insurance company from Belgrade provides comprehensive protection for your home, including residential property (insurance covers damage to your apartment or house caused by various risks), household items (includes coverage for damage or loss of personal belongings inside the home) and ancillary facilities (the policy includes insurance of ancillary facilities such as garages). This policy protects your home, its contents and ancillary facilities against unforeseen events.

For more detailed information on covered risks and insurance conditions, it is recommended to visit the official website of Globos Insurance or contact their representative directly."

Detailed interpretation of policy coverage

ChatGPT can analyze the standard terms of an insurance policy, explain what is specifically covered by the insurance and what is not, explain what is excluded and interpret specific clauses or add-ons in the policy. A question was raised about the coverage of water spill risk from the standard property insurance terms and received a response at the standard human customer support level of the insurance company's contact center.

Question: "In the case of water damage that leaked from the dishwasher and destroyed furniture in an apartment covered by a household insurance policy, will the insured receive compensation?"

ChatGPT's response: "In the case of water damage that has leaked from a dishwasher and destroyed furniture in an apartment, whether the insured will receive compensation from the household insurance policy depends on the specific terms and coverage provided by the policy. Household insurance policies often cover damages caused by water leaks from various appliances in the apartment, including dishwashers, washing machines, refrigerators and other appliances that use water. However, this depends on the specific policy, so it is important to check whether the damage is caused by an exit water from the dishwasher (e.g. due to machine failure or poor installation) Many policies cover leakage or leakage from the appliance, but check that this is explicitly included in the terms.

If damage from water leaking from the dishwasher is not excluded from coverage in the policy terms, the insured will likely be compensated for the destroyed furniture, subject to possible application of deductibles, copayments

or other limits. It would be best to check the specific terms of your home insurance policy, as policies vary in terms of coverage and exclusions."

Simulation of the execution of bureaucratic procedures in claims

ChatGPT explains how the payment of damages works in specific situations (e.g. traffic accident, property damage, medical expenses) and provides guidance on how to proceed in the event of an insurance claim. The question was asked to explain the procedure of a particular insurance company. In the answer, ChatGPT used general knowledge in combination with specific data for the website and phone number of the specific company.

Question: "How should a driver whose vehicle has been hit by another vehicle who has an motor third part liability insurance policy with Dunav insurance company report the damage?"

ChatGPT's response: "If you are a driver whose vehicle has been hit by another vehicle that has an motor third part liability insurance policy with Dunav Insurance, the claim process depends on the circumstances of the accident. Here are the steps you should take:

Steps for reporting damage to Dunav Insurance

- a) Collecting evidence at the scene - Immediately stop the vehicle and secure the scene of the accident. If there are injuries, call the ambulance (194) and the police (192). Photograph the damage to both vehicles and the scene of the accident. Write down details of witnesses, if any.
- b) Filling out the European report or calling the police - If there are no injuries and both drivers agree on the circumstances of the accident, you can fill out the European report on a traffic accident. If there is a discrepancy, serious damage or injuries, be sure to call the police, as their records will be needed to report the damage.
- c) Report the damage to Dunav Insurance - The owner of the damaged vehicle should report the damage to Dunav Insurance, but you can also help in the process. Damage can be reported in person at the Dunav Insurance branch office, online through the website: www.dunav.com or by phone at contact center number: 0800 386 286. Required documents for application: completed European report or police report, traffic license and driver's license, insurance policy of the vehicle that caused the damage and photos of the damage to the vehicle and the scene of the accident.
- d) Damage assessment and payment - Dunav Insurance will organize a damage assessment. The injured party can receive compensation or repair the vehicle in authorized service centers. After the solution, the payment is made to the account of the owner of the damaged vehicle or service.

If you have additional questions, it is best to contact Dunav Insurance directly for accurate information about your case."

Education about the rights and obligations of the policyholder

ChatGPT helps users understand their rights and obligations towards the insurer and explains what the insurance company can ask for and receive from the insured and vice versa. In the following answer, ChatGPT showed a clear understanding of the Law on Obligations from the SFRY period, which is still valid in Serbia, and the behavior in the domestic practice of the insurance industry.

Question: "What can the insured do if the insurance company decides to increase the annual installment of multi-year kasko insurance?"

ChatGPT's answer: "If the insurance company decides to increase the annual installment of multi-year kasko insurance, the policyholder has several options:

a) Check the terms of the contract - look at the insurance policy and the general conditions you signed. Multi-year kasko insurance contracts often provide for the possibility of premium adjustments, but the insurer must clearly state the reasons.

b) Contact the insurance company - Ask for a written explanation of the premium increase. Ask about the possibility of keeping the old price or getting a discount.

c) Compare offers from other insurers - Check prices from other insurance companies. If you find a better deal, you may consider switching to another insurer.

d) Terminate the contract without penalty (if possible) - If the contract does not have a premium increase clause, you can request the retention of the old price or termination without penalty. If there is a premium increase clause, check if there is an option to get out of the contract.

e) File a complaint or complaint - if you think the increase is not justified, you can file a complaint with the insurance company. If you do not get a satisfactory answer, contact the National Bank of Serbia, which supervises the work of insurance companies.

f) Tip - If you pay the premium in installments, do not stop the payment before checking the consequences. Always ask for written confirmation of the terms and any changes to the policy."

Simple and fast communication

ChatGPT answers questions in real time, providing information in simple language that even teenagers can understand. It speaks your language and can simulate the role of an insurance advisor, explaining complex information in an easy-to-understand way. It is best to check in practice at <https://chatgpt.com> how ChatGPT answers questions, explaining complex insurance information in an easy to understand way.

7. LITERATURE

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