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DECEMBER 5, 2024

The Transformative Impact of Artificial Intelligence on the Insurance Industry



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Artificial intelligence (AI) has become a driving force in reshaping industries worldwide, and the insurance sector is no exception. The rise of [big data](#) and the growing demand for advanced data processing have fueled AI's expansion. With AI, companies are now able to drastically improve their computing capabilities and improve operations.

Thanks to AI, we can process complex data and perform computations at speeds impossible for humans. As we achieve higher processing power, increased memory capacity, and further our global connections and the speed at which data is generated, it will be that much more important to have big data management tools such as AI to sift through, process, and analyze that data. Some of the latest advancements have AI creating original content that normally would take human skill, called generative AI. AI can now generate original text, images, audio, code, voice, and video. For example, AI can generate audio for customer service representatives, create a video of a vehicle accident, or write code for a marketing campaign targeting new home buyers.

The insurance industry is no exception to the influence of AI. AI holds significant potential to transform the insurance industry, with varying approaches across companies—some embracing rapid adoption and others proceeding with caution. This article discusses how AI is revolutionizing traditional practices in underwriting, claims processing, customer service, and risk assessment, offering new opportunities for efficiency and innovation.

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AI has the potential to impact insurance processes in the following key [areas](#):

FORECASTING AND PREVENTION OF RISKS

An area of great potential, AI-powered [predictive analytics](#) empower brokers and insurers to identify emerging risks and proactively mitigate them. By analyzing the massive amount of data insurers have and identifying correlations, AI algorithms can forecast potential risks associated with climate change, cybersecurity threats, and other emerging challenges. Brokers can then develop proactive risk management strategies, offer risk prevention advice to customers, and ultimately help reduce the frequency and severity of claims.

RISK EVALUATION AND UNDERWRITING

Insurance companies sit atop mountains of [data](#). AI enables insurers to harness the power of [big data](#) to enhance underwriting processes and assess risks more accurately. By analyzing a wide range of data sources, including demographic information, social media activity, telematics data from connected devices, and even satellite imagery, AI algorithms can provide insurers with a more comprehensive understanding of policyholder behavior and risk profiles. This data-driven approach allows insurers to develop more tailored insurance products and adjust premiums more accurately based on individual risk factors.

CLAIMS MANAGEMENT AND FRAUD DETECTION

One of the most significant impacts of AI in the insurance industry is its ability to help brokers and insurers streamline claims processing and detect fraudulent activities. Recent progress in natural language processing (NLP) algorithms (how AI processes language) can allow these technologies to analyze claims documents, emails, and customer communications to expedite the claims settlement process. Additionally, AI-powered systems can detect patterns indicative of fraudulent claims, significantly reducing losses due to insurance fraud and improving overall efficiency.

OPERATIONAL EFFICIENCY AND COST REDUCTION

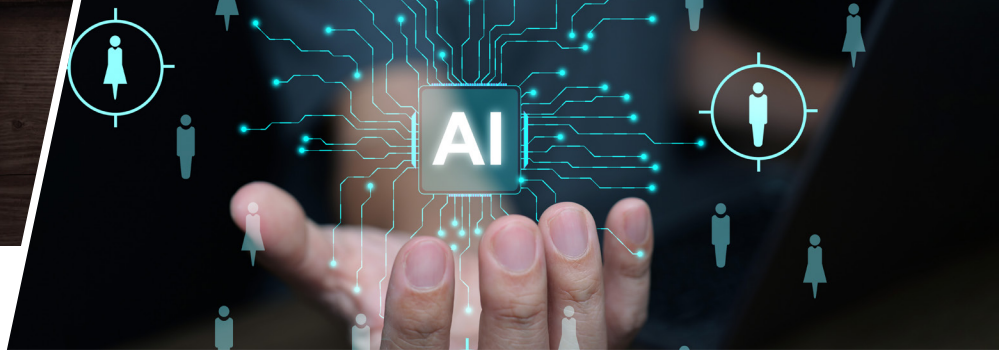
AI technologies optimize behind-the-scenes operations, automate repetitive tasks, and streamline administrative processes, leading to significant cost savings for insurers and improved efficiency for brokers. From document digitization and data entry to claims adjudication and policy administration, AI-powered systems enhance operational efficiency, reduce manual errors, and free up employees to focus on more strategic tasks. AI-driven insights also enable insurers to allocate resources more effectively and optimize pricing strategies.

AI can also analyze the large amounts of loss data brokers receive and highlight loss trends, claims management practices, and benchmark that data across similar industry peers. This enables brokers to identify necessary resources, trainings, and have more meaningful conversations with clients to improve their overall risk. AI can also assist brokers with schedules and applications by identifying incorrect vehicle identification numbers, incorrect property addresses, missing application information, and more, allowing brokers to spend more time negotiating on behalf of clients and finding solutions.

REGULATORY COMPLIANCE AND ETHICS

As AI becomes increasingly integrated into insurance operations, regulatory compliance and ethical considerations are vital. Brokers and insurers must ensure that AI algorithms comply with regulatory requirements, such as data privacy laws and anti-discrimination regulations. Brokers and insurers are starting to see claims of AI automatically [rejecting](#) job applicants over a certain age or being a certain gender. Moreover, transparency and accountability are essential in AI-driven decision-making processes to mitigate potential biases and ensure fair treatment of policyholders.

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CONSIDERATIONS

As with any new technology or advancement, we need to consider the consequences of the use of our new capabilities. As companies adopt AI technology to streamline processes, it is easy to overlook some consequences as we push to incorporate new technologies as quickly as possible. Employers are using AI to accelerate the hiring process and make hiring decisions. According to the Equal Employment Opportunity Commission (EEOC), more than 80% of employers use AI to make decisions. Whether it is used to scan resumes, interview applicants, train employees, or conduct performance reviews, these decisions are not always overseen by humans. AI can discriminate in several ways. For example, the insurance industry is seeing claims made against employers for automatically rejecting applicants of a certain age, sex, or race. Video-interviewing software may automatically reject applicants with a speech impediment because the software cannot understand their words. As a result, insurance companies are paying out claims in the hundreds of thousands to rejected applicants.

AI uses algorithms to interpret and interact with data. These algorithms can be easily hacked and manipulated without proper security controls in place. Manipulated algorithms can produce inaccurate data or results, even if the system is operating correctly, leading to inaccurate, biased, or plagiarized decisions. An AI system operating with the correct algorithms still has the risk of being

abused. As we continue to adopt AI technology, we must ensure proper training for staff involved in using AI, robust employer/vendor controls are in place, and enforce policies that set roles, accountability, and transparent and accurate governance of AI technology.

Historically an industry that has been plagued by archaic processes, artificial intelligence is modernizing the insurance industry, driving innovation, and transforming traditional business models. AI technologies offer unprecedented opportunities for brokers and insurers to thrive in an increasingly competitive landscape and transition from a loss compensation model to loss prediction and prevention. This may cause insurance companies to rethink traditional insurance language and policy coverages and design newer insurance products. However, as insurers and brokers embrace AI, they must navigate regulatory complexities, uphold ethical standards, and ensure that AI-driven decisions prioritize fairness, transparency, and the best interests of policyholders. By harnessing the power of AI responsibly, brokers and insurers can unlock new avenues for growth, resilience, and long-term success in a world full of complex risks.

Contact an experienced insurance broker to learn more about how AI is impacting the insurance industry and how it can be used to improve your insurance programs.

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