



AI Insurtech - Embrace the Tech Revolutionizing Insurance

Everything You Need to Know about the Insurance Industry and Artificial Intelligence



INTRODUCTION

Everything you know about the insurance industry is set to change over the next five to 10 years thanks to Artificial Intelligence (AI).

When we say everything, we mean everything, from the ways you interact with customers and create insurance plans, to claim processing and data gathering. The robots have already arrived; it's time to roll out the red carpet.



The entire insurance industry is predicated on forecasting the future with reasonable certainty, and mitigating or eliminating unnecessary risks for **companies and individuals**. Failure to meet the growing demand for and necessity of AI-driven technology won't just leave you in the metaphorical dust. It entails a real risk to your operational abilities and competitive longevity.

Insurance companies frequently contact the Intellias team to ask us for support in entering this new AI-driven era; it's something that we've become highly specialized at. We've heard many reactions to the growth of AI, ranging from the highly curious to the deeply wary.



Being cautious about technological change is understandable, but it is not the forward-thinking attitude that characterizes today's insurance industry. Risk is good; it brings forth opportunities for improvement and profit. So does AI in Insurtech.

Pavlo Khropatyy

VP, Global Head of Delivery Financial Services & Insurance at Intellias

In this eBook, we will cover the **essentials of AI in Insurtech**, including how it will affect the operation of insurance companies, its benefits and risks. Our book isn't just theoretical; we will also cover the practical components of successfully onboarding and utilizing AI-driven technologies. It's the essential guide to adopting AI-driven Insurtech.

Key AI Tools Used in Insurtech



Generative AI

Familiar to the general public, this technology is capable of producing, i.e. generating, a wide range of content, including text, images, audio, and synthetic data.



Large language models (LLMs)

These are programs that are capable of producing and recognizing text. Large amounts of data are required to train LLMs.



Chatbots

AI-driven chatbots that have been programmed to converse like humans through the use of natural language processing (NLP). This helps support client retention.

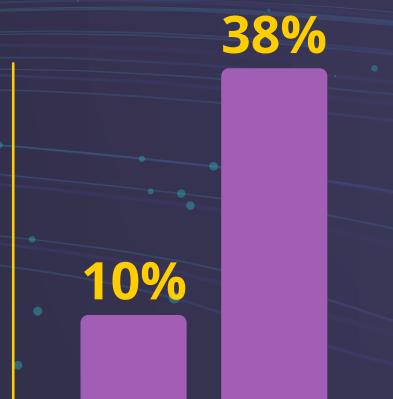


Machine learning

These are computer systems that can recognize patterns in data and make conclusions using statistical models and algorithms, significantly improving fraud prevention/detection.

Buy-in for emerging technology

Technologies positively impacting profitability and performance



Data and Analytics

66%

AI and Automation

64%

Public Cloud and XaaS Technologies

63%

Data from KPMG

Find out more about how Intellias works with machine learning.

Find out more here

AI in the Insurance Industry

AI is not new to the insurance industry, and many of the associated tools insurers have at their disposal at present have been around for some time. Current use cases can be found in contact center operations, claims processing, data forecasting, and risk modeling, using tools like **predictive modeling and machine learning**. What's changed recently is the power and proliferation of AI-driven insurtech.



Generative AI has changed the perspective of the insurance industry. It helps companies to prevent and mitigate risk while improving the customer's experience. As a result, insurance and financial services businesses can become more resilient thanks to AI, allowing them to experiment more, and offer new products and services.

Hana Rizvić

Head of AI at Intellias

When **Chat GPT** was launched for the general public it gained over 100 million users within two months, heralding the arrival of generative AI. Before this happened, AI could generally only be used to spot trends in data and extrapolate conclusions or forecasts from them. Generative AI, this new evolution, could be used to create new content—whether it be interactive simulations, literature, photos, music, coding, art, or photographs—by training LLMs to process enormous amounts of datasets.

AI in Insurtech - Boost Your Customer Experience

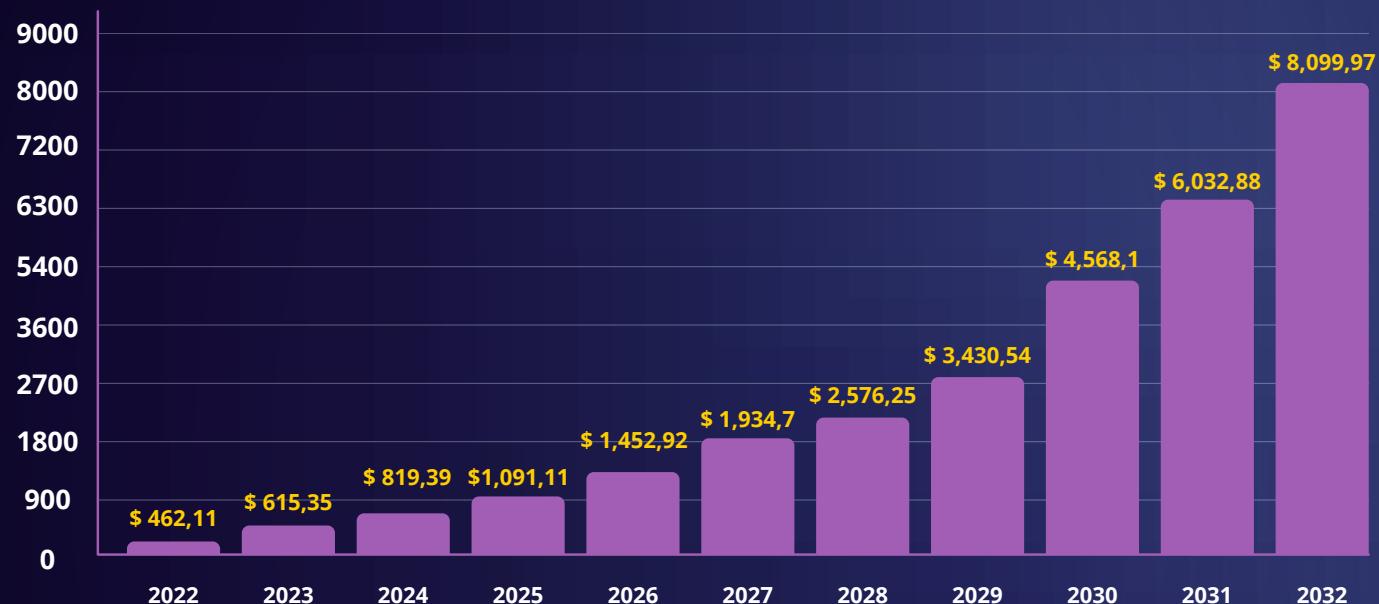
[Find out more here](#)

- Some 63% of insurance executives are currently investing in AI and machine learning, and 75% of executives are focusing innovation efforts on the ease and speed of opening accounts with the help of AI.
- AI-driven Insurtech can boost claims accuracy by up to 99.99%, operational efficiency can improve by up to 60%, and customer experience can be improved by up to 95%.
- Over nine in 10, or 97% of financial services and insurance organizations believe that generative AI will have a big impact on their success in the next three.

Generative AI has shifted insurance's natural stance from a reactive to a proactive industry, which presents many opportunities for improvements to corporate efficiency with significantly improved forecasting. This will allow insurance companies to use generative AI to **handle routine claims processing** instead of individual case handlers and create highly personalized offers at the same time.

Generative AI extends the care and knowledge of hyper-personalized solutions to more people. Digital agents, diverse chat functionalities, ask-me-anything capabilities and the evolution of enterprise level generative AI solutions are providing more options than ever in insurance companies.

Estimated spend on generative AI in the insurance industry (USD million)



Data from Precedence Research



Generative AI extends the care and knowledge of hyper-personalized solutions to more people. Digital agents, diverse chat functionalities, ask-me-anything capabilities and the evolution of enterprise-level generative AI solutions are swiftly bridging existing gaps within the customer-advisor-carrier framework in the industry—and this is just in the beginning stages.

Accenture

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Key Pain Points Currently Faced by Insurance Companies

The insurance industry is subject to several key challenges that are likely to increase in scale over the next 24 months. Change of any sort can present difficulties for any company. Still, while AI in Insurtech can certainly be classified as something that will disrupt the industry, it isn't among the primary pain points insurers face.

Instead, it's an opportunity. There are other serious challenges to contend with.



Increased Processing Time/Costs

In Q1, 2023, the aggregate net underwriting loss for the US industry came to US\$7.34 billion. This was the worst Q1 figure ever recorded.



Higher Premium Volumes

With more major line policies built into other types of third-party transactions via embedded finance, gross premiums are forecast to grow by as much as six times, to US\$722 billion by 2030.



Cybersecurity Risks

Criminals are already writing code with AI-powered language models like ChatGPT. AI can be used to create new methods of data theft or poisoning in addition to carrying out more automated attacks.



Increased Device Connectivity

Personal device penetration via the Internet of Things (IoT) will increase exponentially, joined by new, growing categories such as clothing, eyewear, home appliances, medical devices, and shoes. Up to one trillion connected devices could exist by 2025, increasing insurance coverage.

How AI-driven Insurtech Addresses Them

Increased Processing Time/Costs



Generative AI significantly speeds up the underwriting process via automation, improving the customer experience. It also significantly reduces the cost spent due to considerably less reliance on human input.

Higher Premium Volumes



Insurers can use generative AI and LLMs to keep track of the increased premium volumes they experience and create personalized policies via embedded finance. AI tools can also be used to track and control increased premiums.

Cybersecurity Risks



AI tools like machine learning can automatically detect and eliminate cybersecurity risks in your internal systems. Generative AI can generate random cybersecurity scenarios that insurance companies can use to identify and prevent security breaches.

Increased Device Connectivity



Machine learning, LLMs, and generative AI can help insurance companies cope with increased premium and underwriting workloads created by IoT-driven device connectivity via risk prevention, data collection, and policy creation, respectively.

Selecting the Right AI-based Insurtech Support

Getting support to integrate AI-driven Insurtech is the right choice. Integration is a complex process requiring specialist personnel who understand the intricacies of the financial services and insurance industries, and have in-depth knowledge of AI technologies.

Focus on Data Gathering Capability

1

As data quality **directly impacts** model quality, it's important to ensure that your AI-based insurtech support can collate large amounts of data effectively. This data needs to be properly processed and aligned; otherwise, it's useless.

Ensure You Have Data Exploration & Fraud Detection Expertise

2

Do not underestimate the power and complexity of generative AI, so set realistic expectations. It is capable of dialogue, accepting applications, and search functions, but it's not error proof. It can, for example, encounter issues with handling mathematical problems.

Set Realistic Expectations

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What to Look for in an AI-Insurtech Solutions Provider

Choose a solutions provider that can provide the following services:



Deployment of new service-based offerings



Reduced operation costs via AI-driven automation



Elimination of low-value/low-tech processes



Future-proof technology planning



Personalized sales, support, and onboarding services

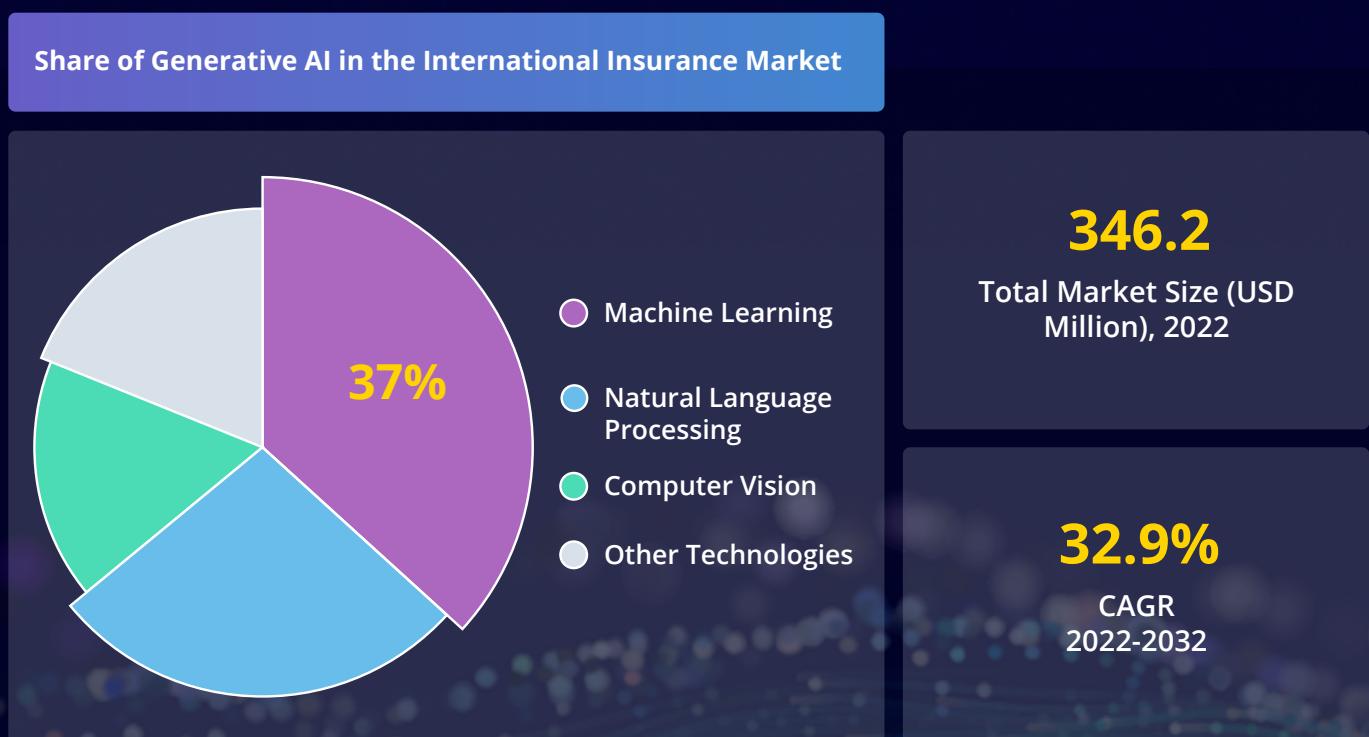


Agent productivity improvement

How to Onboard AI-based Insurtech

Onboarding any new technology can be a difficult process, especially if your company continues to rely on outdated legacy systems, a common problem in the insurance industry. There are often cultural issues too as some staff members and departments may be reluctant to change their working processes. The combination of these two factors can make onboarding AI-based technologies a slow, difficult, and costly process without proper support.

To successfully onboard AI-based Insurtech, we recommend that you contact an expert solutions provider as the experience they can provide will make the process significantly more streamlined. They need to be able to offer management consulting sessions, teaching, building, education, etc. to help ensure your team's collective mindset is more aware of the **benefits of AI**.



When you start onboarding generative AI technology, there will be two groups that will be most affected: your clients and your internal teams that work with **data regularly**. Your onboarding processes should focus on solutions that provide high-level data storage, which is essential for your new AI-driven systems to create highly personalized responses.

The same process also applies to **sales and data analysis teams**. These two groups will be more likely to work with LLMs. This technology allows the user to explore data step by step and even perform some beginner - to mid-level machine learning analysis. These include outlier detection and hypothesis testing.

Onboarding Checklist

When onboarding new AI-driven insurtech it helps to have a system in place to ensure the process goes as smoothly as possible. **Hana Rizvić**, Head of AI at Intellias, recommends you adhere to the following steps to successfully navigate the onboarding process:

Section A

Insurance domain-focused AI applications

ML models for risk assessment

Employing machine learning algorithms to forecast and preempt potential risks. This is invaluable for claims processing and can also aid in streamlining onboarding by identifying challenges using existing company data.

Anomaly Detection

AI's capability to spot anomalies in customer interactions and claims extends to pinpointing errors in onboarding processes. This extends to forecasting future behavioral patterns, allowing you to remove potential obstacles in the implementation pipeline.

Customer Focused ML Modeling and Data Analytics

After deploying new AI tech, the onboarding journey continues. Companies must actively engage with their technology, leveraging AI data and analytics to gauge tool efficacy for their clients. Employ machine learning to innovate, crafting updates and fresh offerings for enhanced service delivery.

Section B

Compulsory AI Application

RAG Based Solutions for Chatbots

RAG tools enhance the delivery of accurate and timely details on policies, claims, and coverage options, crucial for optimal customer satisfaction. Ensure your chatbots incorporate them, as the data gathered can yield actionable insights, enhancing overall service quality.

Integrate Your Chatbot(s)

Integrating AI chatbots into your company's systems, like CRM, claims management, and policy databases, is vital. The complexity of this task varies based on your existing systems.

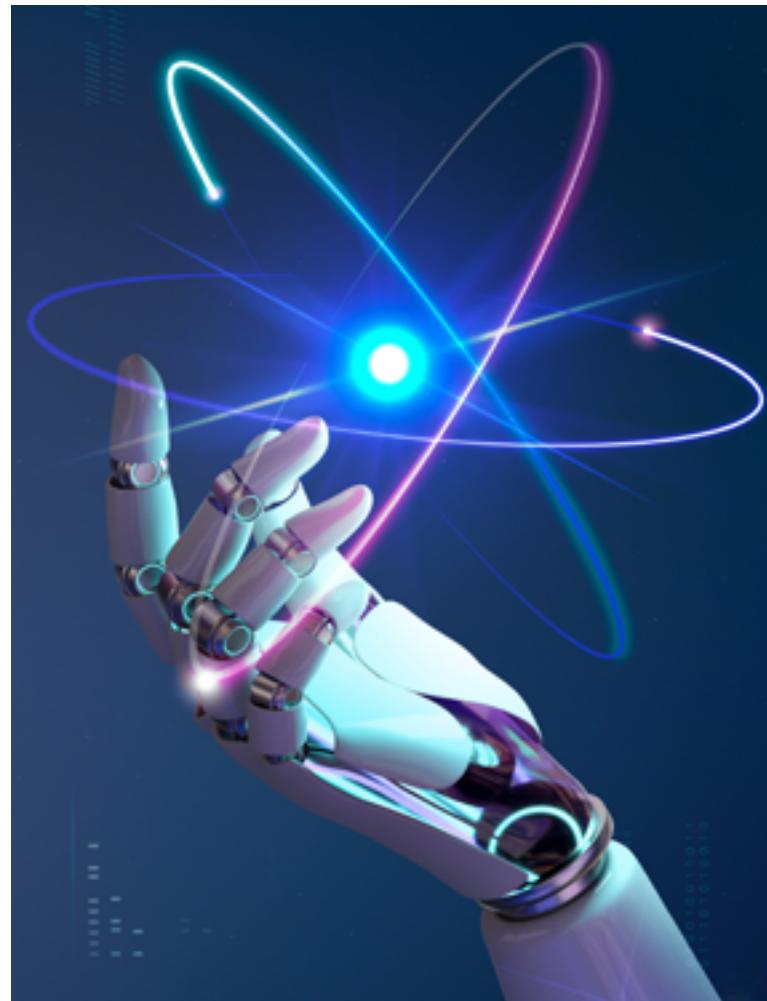
Launch AI-driven Automated Document Processing Based on OCR/NER

OCR converts typed, handwritten, or printed text from images into a machine-readable format. NER employs ML and AI algorithms to identify and categorize entities in unstructured text, enabling efficient data structuring and categorization in the cloud.

Adopting AI-based Insurtech in Figures

The numbers don't lie; AI is going to transform everything we currently know about the insurance industry, and the companies that adapt and adopt the quickest will gain the most from these new technologies. Consider the following factors if you're still on the fence about adopting AI technologies as an insurance company.

- According to McKinsey, AI technologies could inject up to \$1.1 trillion in annual value into the global insurance industry.
- AI-driven Insurtech is expected to reach a market value of USD 35.77 billion, representing a Compound Annual Growth Rate (CAGR) of 33.06%.
- Companies that utilize and excel with personalization technology like generative AI experience an on-average 40% rise in revenue.



As the insurance industry undergoes a seismic, tech-driven shift, AI continues to push the evolution of how insurers make significant service and operational gains. McKinsey estimates that AI technologies could add up to \$1.1 trillion in annual value for the global insurance industry.

McKinsey

Join the AI Revolution in the Insurance Industry – Utilize our Experience

AI is a revolution and it's time for you to join. Learning about, adopting, and onboarding new technology can be a challenge, and the Intellias team has the expert skills you need to do it successfully.

Don't let your competitors leverage an advantage over your company by adopting AI-driven Insurtech quicker than you. [Contact Intellias](#) today and find out more about how we will support your team throughout the AI integration process.

How AI and advanced analytics can help offer better personalized services and enhance customer experience

Acquisition

- Identify target customers and predict propensity to buy
- Create customized offers and campaigns

Servicing

- Provide more sophisticated chat experiences
- Scale contact center AI
- Call topic modeling

Relationship expansion

- Recommend next best offers
- Value through an ecosystem of partners
- Empower agents and brokers with tools to strengthen customer relationships

Retention

- Sense early signals for customer attrition
- Be proactive with retention tactics

Data from Deloitte Analysis

[Investigate AI-Powered Digital Assistant Platform](#)

[Click for more](#)

Still want to learn more? Then check out these case studies covering our work to successfully implement AI-driven technology for our clients:

AI-Assisted Development of a B2B Healthcare Management System

Intellias collaborated with the development team of a technology-oriented benefits management platform to build an enterprise-scale solution that automates employee healthcare deductions and reimbursements. Intellias designed a scalable, cloud-based, turnkey benefits management solution that can be flexibly customized and embedded in enterprise flows via an API.

ADAS Solution for Electric Vehicles

Intellias developed an ADAS solution customized for electric vehicles (EVs), incorporating advanced algorithms and sensor data for enhanced safety and efficiency. The solution included lane departure warning, adaptive cruise control, and collision avoidance, improving driving experience and aligning with the demand for smarter, safer transportation in EVs.

Intelligent AI-powered Retail Chatbot to Promote a Premium Brand

Intellias developed an AI chatbot for a Fortune 500 retailer launching premium products. The retail chatbot, employing natural language processing, autonomously addresses customer inquiries and offers relevant guidance, enhancing the shopping experience. It also serves as an eLearning tool for store salespeople, educating them on product features.

ChatGPT-Enabled Platform for Evaluating Individual Employees' Skills

Intellias collaborated with a global IT giant to optimize their operations and foster growth. The resulting solution was an AI-powered platform, leveraging ChatGPT, designed to assess individual expertise and performance, streamline processes, and identify training needs for enhanced efficiency and sustainable progress.

Find out more about Intellias and its case studies

Click for more

ABOUT INTELLIAS

Intellias is a trusted technology partner to financial institutions and insurers, offering a spectrum of consultancy, engineering, operations, and technology services.

Over the past 20 years, we have helped financial services providers and banking leaders like Swissquote, Nomo, FinCompare, Zolva, and

Bluecode, to deploy innovative customer-facing solutions and modernize their technical infrastructure. Our company provides proactive guidance on adopting the digital technology at the heart of FS&I — machine learning, predictive analytics, data warehousing, cloud, and blockchain.

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