AI in Insurance

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Agenda

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01

Use of AI in insurance

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Polling question #1

To what extent do you believe that AI will revolutionize the way insurance operations is being conducted today?

Access the poll here

(A) To a very large extent

(B) To a large extent

(C) Average impact

(D) Low impact only

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Use of AI in Insurance

- Artificial intelligence (AI) is rapidly transforming workflows, driving innovation, and reshaping industries. As with other transformative changes brought by technology, it will be hard if not impossible for companies, including insurers, to ignore AI.

- AI in insurance is a transformative technological integration that leverages AI algorithms and data analytics to enhance various aspects of the insurance industry.

- Through machine learning and predictive modeling, AI enables insurers to analyze vast amounts of data, assess risk profiles, and predict future trends with higher accuracy. This leads to improved underwriting processes, more precise risk assessments, and personalized policy offerings.

- AI is revolutionizing the insurance landscape by driving operational efficiency, reducing costs, and providing better customer experiences.

- AI is being used across various domains at insurance companies including:
    - Underwriting and pricing
    - Claims handling
    - Actuarial
    - Customer service
    - Fraud prevention

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How insurers are using AI to supercharge the productivity of their insurance operations

Examples of AI capabilities for insurers

Underwriting and pricing	Claims processing	Actuarial	Virtual assistants and chatbots	Fraud detection and prevention
• Being used to analyze large sets of data to make predictions about risks and determine how policies should be priced. • For example, products are being tailored more precisely to the customer based on factors such as health and medical data.	• Streamlines claims processing making it more efficient. • Automates routine tasks. • Reduce human manual errors. • Results in faster settlement of claims.	• Reduce time spent analyzing large data sets used in model scenarios. • Increase automation of numerous manual and repetitive tasks.	• Chatbots and virtual assistants are being used to enhance customer service by providing instant responses to inquiries and are available to customers around the clock.	• Fraud detection solutions are being used to analyze massive amounts of data from multiple sources, enabling insurers to spot and flag unusual patterns that a human might miss, thereby detecting possibly fraudulent claims. • For example, used to analyze documents and images related to a claim to find potential indications of fraud.

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Polling question #2

In which of the following cases are you using AI technologies? (select all that applies)

Access the poll here

A — Underwriting and pricing

B — Claims processing

C — Actuarial

D — Virtual assistants and chatbots

E — Fraud detection and prevention

F — Other cases

G — Not currently using AI

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Generative AI technologies in insurance

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What is generative AI (GenAI)?

Technology appearance

Artificial Intelligence

1943

AI, or artificial intelligence, is a field of computer science that focuses on creating intelligent machines capable of tasks requiring human intelligence.

Machine Learning

1959

Machine learning (ML) is a subfield of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behaviour.

Deep Learning

2006

Deep learning is a subset of machine learning, which is essentially a neural network with three or more layers.

Generative AI

2017

Generative AI is a type of artificial intelligence that can create new content such as images, text, audio, or video based on the data it has been trained on, using techniques like large language models, transformer neural networks, and generative adversarial networks

Artificial Intelligence

Machine Learning

Deep Learning

Generative AI
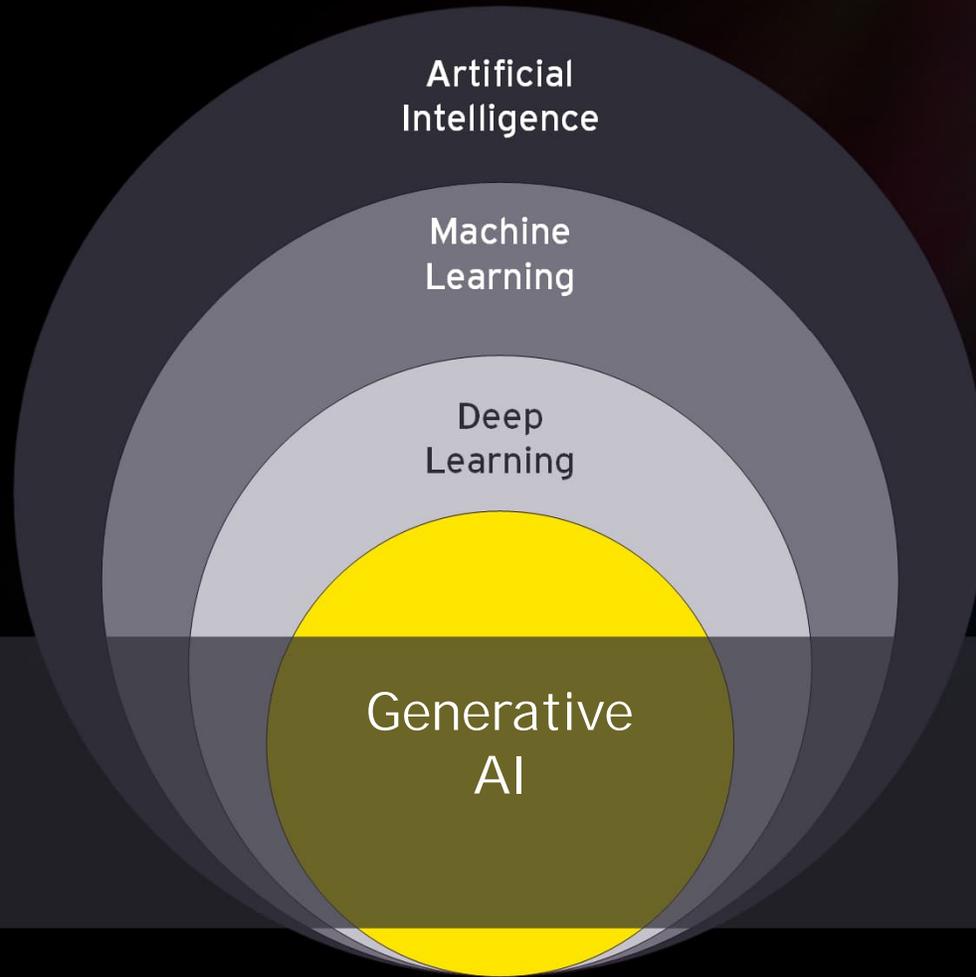
70% of financial services leaders believe that the potential benefits of GenAI tools outweigh the risks

Text — Generate human-like text responses and participate in the contextual conversation

Image — Generate photorealistic images based on a text prompt

Speech — Text-to-speech models, mimic voice and removal of filler sounds, stuttering and mouth sounds

Code — AI-assisted bots that write code and provide recommendations to development teams

Multi — The AI model learns from a variety of data sources, including images, texts and audio

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GenAI transforms traditional AI technology by integrating and enhancing their combined abilities to unlock and enable five GenAI core capabilities

Generative AI's 5 core capabilities

Content creation

Generate contextual contents as required using internal/internet data

Machine intelligence and prediction

Conduct complex analysis using simple command prompts

Input recognition and digitization

Extracts and summarizes relevant information from various sources

Task execution and assistance

Transform input into specific outputs using appropriate command prompts

Process automation and management

Automate processes with command prompts and discover process inefficiencies

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GenAI can transform the insurance industry from the front office to back office functions

Front office

1. Customer experience

e.g., distribution, service, chatbots, automated assistants

Back office

2. Operational effectiveness

e.g., finance, risk, audit, new products & services, talent

... all built on solid foundation of ...

3. Governance, oversight and trust

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Insurance use cases can be enhanced to deliver on greater business value across the entire value-chain

Customer service and claims	Marketing and distribution	Product/underwriting	Back office operations

Customer service and claims

Customer Service

- Call center analytics / customer interaction insights
  a) Identify reasons and sentiment for call
  b) Auto populate customer relationship management (CRM)
- Financial advisors / customer service chatbots
  a) Suggestions and recommendations for product, coverage, etc.
  b) Claims, billing Q&A

Claims

- First notification of loss (FNOL) – Support writing of claim notes
  a) Fraud
  b) Adjuster performance
- Synthesize and summarize complex legal documents
- Next Best Action and segmentation
- Anomaly detection

Marketing and distribution

- Hyper-personalization
  a) Auto generate response to customer query
  b) Marketing campaigns and customer communication customized per personas
- Market research
  a) Compare competitor's marketing materials (websites, social media content, etc.)
  b) Summarize focus group discussions, customer interviews, customer reviews
- Agent/broker chatbots
  a) Provide suggestions and recommendations for product, coverage, etc. to customer
  b) Answer complex questions related to agent/broker's commissions/ compensation
- Customer 360 and lifecycle management

Product/underwriting

- Competitive intelligence
  a) Compare products (coverages, clauses, exclusions, etc.) with competitor's products
- Synthesize and summarize
  a) Compare and highlight changes across product versions, e.g., two ISO product versions
  b) Identify gaps in submissions (e.g., large commercial risks)
  c) Third party data (e.g., social media, news, public reviews) augmentation and summarization and trends
  d) Summarize financial reporting, actuarial findings, etc.
- Underwriting assistant
  a) Answer questions for complex products from product and rating manuals, UW guidelines
- Dynamic pricing
- Next Best Action and policy upsell
- Single policy view

Back office operations

- IT/engineering
  a) Generate code to query data models
  b) Convert natural language to SQL (or vice versa) for telemetry data
  c) Convert natural language to query proprietary data models
  d) Code reviews and documentation
- Virtual assistants
  a) Generate email drafts (e.g., CXO communications) aligned with brand image/cultural values
  b) Assist in creating business presentations, e.g., images/videos using text-based prompts
  c) Synthesize and summarize meeting minutes
  d) Search through structured and unstructured documentation
- ChatGPT-enabled BI
- Speech and text analytics
- Business process automation

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AI use cases: First Notice of Loss (FNOL) solution

Simplified underwriting using the Insurance AI Solution

Integrating AI in First Notice of Loss solution

Benefits over traditional methods

This solution streamlines the entire ingestion, submission and risk assessment processes of underwriting, helping underwriters to focus more on decision-making than on data gathering, thus improving operational efficiency.

Leveraging GenAI and Machine Learning (ML) to modernize insurance claims and First Notice of Loss processing is built on Snowflake technology and integrated with Guidewire ClaimCenter.

Underwriting Solution

FNOL

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Insurers who are already applying GenAI to enhance their customer experience and testing other user case scenarios

Zurich Insurance (Switz)	AXA (US)	ICICI Lombard (India)	British Caribbean Insurance Company (Barbados)
Is testing how it can use ChatGPT artificial intelligence technology in areas such as claims and modeling. It is feeding in the most recent six years of claims data in an attempt to identify the specific cause of loss across a whole section of claims, with the aim of improving its underwriting	Using AI for risk assessment, claims processing and customer service to improve productivity and efficiency.	Has launched a Responsive Intelligent Assistant (RIA), an NLP-enabled chatbot in the form or a human-like avatar to interact with customers in English. It is designed to resolve customer enquiries on multiple platforms such as WhatsApp, Telegram and their website.	British Caribbean Insurance Company (BCIC), a leading provider of general insurance in the Caribbean, has unveiled the region's first omnichannel insurance ecosystem.

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GenAI technologies in insurance

AI comes with challenges that need to be assessed and, where relevant, addressed by companies, policymakers and regulators. Ensuring that the right regulatory framework is in place is key.

Insurers that seize the opportunity to deeply integrate AI into everything they do will be poised to come out on top. They will be able to conduct more business, faster, in a more personalized manner, and with a better understanding of the underlying risk.

To create lasting business value from AI, insurers need to set a bold, enterprise-wide vision for AI's potential, and deeply, fundamentally rewire how they operate across the various business domains (underwriting, claims, distribution, customer service and more), embedding the technology into every part of the organization.

They will need to completely retool workflows, rethink operating models, work toward a modern data and tech stack, and scale AI by harnessing reusable components for various use cases and business areas. They will need to do this in a manner that creates meaningful improvements.

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Polling question #3

If not already using, when do you plan to investigate opportunities to implement GenAI-enabled technologies (like ChatGPT and Copilot) in your organization?

Access the poll here

A   Already implemented

B   Busy with implementing/testing

C   Starting soon (next 2–3 months)

D   Want to implement but no concrete plans yet

E   Not interested/relevant for your organization

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