How machine learning is changing the insurance industry

Most insurers are missing valuable insights on 85-90% of their data.[1] Are you missing out too?

To thrive in the future hyper-competitive marketplace, insurers need to leverage value from all their data to generate maximum value. This is where **machine learning** comes in.

What is machine learning?

Machine learning is the use of data and algorithms to imitate the way that humans learn.[2] A human trains the algorithm to process data without explicit program instructions. The algorithm uses data to detect patterns to make predictions and recommendations. Over time the algorithm becomes more efficient and improves its accuracy as it gains experience from seeing more data, similar to human learning but faster and at a scale greater than humans can achieve.[3]

Types of data

There are two types of data which are used for machine learning; structured and unstructured. Insurers mostly use structured data in traditional databases, but there is opportunity beyond this type of data.

Structured data

Structured data is highly organised and easily deciphered by algorithms. Structured data is normally created and stored within applications, such as brokerage or insurance software solutions containing policyholder information and policy information (as examples) or has been generated by an automated process such as a telematics device.

Unstructured data

Unstructured data is typically qualitative data and can't be processed by conventional tools because it doesn't have a predefined data model. Unstructured data includes paragraphs of text, documents and images. An example of unstructured data in machine learning would be an insurer using vehicle damage photographs to automatically estimate the cost of repair.

Using machine learning to drive enhanced policy personalisation

Using data to provide more tailored insurance advice is just one way machine learning and AI can be harnessed to benefit insurers.

With the wealth of data now available across IoT devices like smartwatches and in-car telemetry, machine learning models can also be created to tailor policy pricing, enabling healthier lifestyles and safer driving to be rewarded while greater policy accuracy saves the business money. Furthermore, by personalising policies and improving customer experiences, insurers can combat high churn rates through differentiation.

Achieve your machine learning goals – What's your business' next step?

We designed the Kainos 5-level Machine Learning Maturity Scale to help insurers identify where they are on their journey and how they can level up to the next stage.

Level 1	Level 2	Level 3	Level 4	Level 5
You don't employ data scientists or have a data science strategy in place. Outputs are generated by data analysts who explore data and summarise accordingly.	Your data science team or individual data scientist is siloed and separate from data, platform and software engineers. Your data science experiments can't be tracked predictably.	A Chief Data Officer (CDO) role is likely to be present and the need for collaboration between teams is clearly understood. You are looking for more scalable tools to manage increasing data volumes.	You are defining best practices and using a suite of standardised, integrated tools for machine learning. You have a clear infrastructure policy to support machine learning initiatives.	The best practices defined at level 4 have been implemented and standardised. New algorithms and methodologies are proactively reviewed and assessed to improve insight, performance and productivity.

Download the full version of the Kainos 5-Level Maturity Scale in our ebook, here.

Get Started with Kainos' Machine Learning Enablement Programme

MLE workshop
Define and implement your data science strategy

Assessment of potential and opportunity

Key considerations & quick wins

Engaging key stakeholders

Evaluation of vision for action

Risk management

Return on investment opportunity

Compliance considerations

Cloud transformation alignment

CONTACT OUR EXPERTS TO TAKE ADVANTAGE OF OUR FREE WORKSHOP

Our award-winning Data & AI team tailor workshops to your organisation's needs, allowing you to leverage the capability of machine learning.

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