

BLOG POST

Unlocking the power of data: Machine learning (ML) is ready to upend the insurance business



Here is what insurers and MGAs need to know.

“We are on the precipice of altering change brought on by advances in next-generation computing. The outer limit of what is computationally possible has shaped and defined today’s industries—but as next-generation computers advance, that outer limit is shifting. For enterprises, this can be either an industry-ending event or the biggest opportunity in generations,”

—Accenture [“Meet me in the Metaverse”](#)

A new class of machine is appearing. Computers and computing power are increasing dramatically. Machines are becoming smarter and are now being used to help us answer questions that have been too complex to even try to answer. In February 2022, scientists in the US, Japan, and the UK, used super quantum computers and the theory of holographic duality to look inside a black hole. The simulation showed the curved space-time Einstein predicted and the attached particle strings. Quantum computers are one example of the newly emerging computer power being created today.

So, what does this have to do with insurance?

Data plays a significant role in the insurance space. Insurers are already investing in quantum computing and super computers to help them gain insights into their customers. In addition to all the historical data insurers have collected over the years, they now have access to even more data from online and social media, voice analytics, connected sensors, and wearable devices.

Most insurers process only a small percentage of the data they have available. It has been prohibitively costly to sift through the collected data manually and it is too expensive to use traditional computing. Now, with insurers embracing a more active role in their efforts to corral all the data, they are investing in AI (artificial intelligence), ML, and predictive analytics to help them unlock the power of the data they have collected.

Here's how ML is being used by property and casualty insurers

Within P&C insurance, ML is having a significant impact on new business/underwriting, claims handling, product development and pricing, policy servicing, distribution, customer experience, and fraud detection. Here are four ways ML is being used today:

Machines play a significant role in new business/underwriting, from managing the first interaction with an online customer to deciding what product or service the customer wants. Today, consumers are comfortable receiving computer-generated insurance advice and will actively seek personalized solutions made possible by ML algorithms. At the front end of the customer online journey, insurers are making wider use of chatbots or messaging apps to resolve queries and answer simple questions to streamline and speed up the online quote-to-bind process.

When data volume is huge, ML is superior to human analysis. Using ML, underwriters can focus on the strategy and portfolio management aspects of a line of business, for example, rather than scrutinizing the data manually. Sometimes, AI (artificial intelligence) and ML help develop the underwriting plan.

In claims, ML improves operational efficiency from first reporting of a claim to claims settlement. Most carriers have already started to automate their claims processes. This enhances the customer experience by reducing the claims settlement time. ML and predictive/analytical models also equip insurers with a better understanding of claims costs, which can save insurers millions of dollars through initiative-taking loss management, targeted fraud investigations, and better overall case management. ML enables insurers to have more confidence in figuring out funding allocations for claims reserves.

Fraud prevention is another challenge where ML is uniquely capable and can make an enormous difference in an insurer's bottom line. According to the FBI, more than USD40 billion a year is lost to fraudulent claims in P&C insurance.

ML can help find potential fraudulent claims quickly and more accurately by highlighting gaps in the process where claims are vulnerable to fraud. ML algorithms can also scan historical data and detect patterns that can result in fraud alerts. The level of intense scrutiny ML offers is not possible with a human eye. However, coupling the human eye with ML can work wonders. ML algorithms are superior to traditional predictive models for fraud detection because they tap into both unstructured and semi-structured data such as claims notes and documents as well as structured data to find potential fraud.

The benefit of ML is that it brings order and purpose to unstructured data so it can be more effectively used for business insights. Maybe not yet on the scale of the black hole example cited above, but quantum computers and super computers are being used to solve insurance business challenges today.