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The future of AI in insurance is a work in progress says Tapoly

14 November 2019

Janthana Kaenprakhamroy, chief executive and founder of insurtech Tapoly, responds to the e-trading dilemma 'Computer says no', which *Insurance Times* reported on earlier this week. This exclusive blog explains her take on why the industry still has a long way to go

While the concept of artificial intelligence (AI) is not new, the application and adoption of it in the insurance space as a fully deployable technology is still a "work in progress" and is a long away from being in an advanced or sophisticated state.

Having said that, this technology is one of the most widely adopted across the end-to-end insurance process, whether in the realm of customer services, distribution, underwriting or claims processing.

Many businesses, including insurance companies, are already using AI technology in one form or another and it has indeed proven beneficial, particularly from an operational value and efficiency point of view.

Perfect examples of this are in areas such as enhancing customer service or experience, most commonly in a form of chatbots.

AI is also used for large-scale price analysis and adjustment, particularly in areas where there is lots of data available, such as home and car insurance.

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AI additionally has applications in fraud detection. According to the ABI, more than half a million insurance frauds, totalling £1.3bn, were detected in the UK during 2017. Much of this will have used machine learning to flag unusual patterns in large customer pools that a human might otherwise miss.

Computer says not yet

While the potential benefits of using AI are endless, one of the biggest drawbacks is that a system's ability to make deep knowledge underwriting decisions, in order to replace humans, isn't there yet.

When it comes to commercial liability products, only around 20% of the underwriting process is based on data, and the remainder is based on humans using their experience, knowledge, and intuition.

Without a large quantity of data to run machine learning models, they cannot be used for much of the underwriting decision process.

However, even when the data does exist, the technology relies heavily on the quality and quantity of that data, and often results in 'black box' algorithms that will not be fully understood by AI's operators.

With AI, you can never be sure that it will handle unusual or extreme cases correctly, since you are never sure exactly what it has learned from the data.

For example, when considering the cost of car insurance, you can use AI to look at how the colour of the car affects the likelihood of a claim. Typically, insurers consider red and black cars to be riskier than white or silver, both because darker colours are harder to see at night, and also because they are favoured by 'boy racers'.

However, if you let AI analyse the dataset, it might notice that black and red cars are less common than silver cars, and conclude that more popular colours are safer.

When applied to pricing it may then unduly penalise very rare colours such as lime green, even though this is likely to be an indication of an older car driven infrequently by a careful owner. The AI learned the wrong lesson from the data.

Janthana Kaenprakhamroy, Tapoly's chief executive and founder

Good risk, bad risk

Also, when applied to broader sets of customers, the machine learning models have to tread a thin line between being too inclusive, which leads to taking on bad risks, and too exclusive, which leads to underinsurance.

This requires constant monitoring by an expert (human) underwriter to ensure that risk pools are being catered for, which then reduces the ability of AI to make a big impact on the industry. Even in the case of the fraud detection mentioned earlier, humans still have to review each case after it has been flagged by the algorithms.

If you look at the Insurance 2030 report by McKinsey, manual underwriting will cease to exist for most personal and small-business products across life and property and casualty insurance, but for now we'll have to work hand in hand with machine learning algorithms, and make small steps forward.

It is certainly exciting to be part of this journey and see where the technology will take us.

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