Auto Physical Damage

The Future of Humane Automation in Property & Casualty Claims and Collision Repair: Emotion AI

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Renowned machine learning researcher and New York Times best-selling author, Kai-fu Lee, has described the era we are living in as "the age of implementation," or a time period during which artificial intelligence (AI) is moving out of the lab and into practical applications. As it does, it is raising questions and concerns about what the ongoing advance of AI means for humankind, the future of work, and for those of us in the Property & Casualty industry, the future of claims automation. At the same time, technological advancement continues to march forward with emotional artificial intelligence, or "emotion AI," coming to the forefront. Emotion AI, also called affective computing, is the notion that artificial intelligence technologies can recognize human emotions. To do so, AI looks for cues that may include facial expressions, or micro-movements, eye movements, heart rate and blood pressure changes, and voice volume, tone, and speed fluctuations, among other things. I've written before about "humane automation" in claims—that by automating certain tasks that claims professionals perform, we free up their ability to be more focused on higher-level tasks and human interactions of the claims process, things like being more empathetic and being more available to guide their client through the process. But if we are looking at a future in which AI is emotionally intelligent, will humans need that time or will they become obsolete?

What Emotion AI Means for People in the Claims Process

Gartner predicts that 10 percent of personal devices will have emotion AI capabilities by 2022. As the technology becomes more prevalent, there are three key ways I see emotion AI impacting the Property & Casualty industry and collision repair facilities. First, emotion AI has applications in both vehicles and in the workplace that could prevent accidents and injuries. Second, it has practical applications in claims automation and claims processes, and third, it may be useful in helping return people to their pre-injury state.

Preventing Accidents and Injuries

Emotion AI has a number of workplace applications, but one of the most significant ones is around recognizing stress. By reading eye movements and minute facial expression or tracking heart rate and blood pressure, emotion AI can be trained to recognize stress levels that might lead workers in demanding jobs (first responders, air traffic controllers, etc.) to make poor decisions that could lead to their own or someone else's injury. For workers in virtually any role, it could help identify anxiety, depression or burnout, all things that may contribute to workers' compensation or disability claims. Automobile manufacturers like Subaru already incorporate facial recognition that tracks eye movements to make sure the driver is focusing on the road and sends alerts if they are not. This is just the beginning. Companies like Affectiva have introduced technology that monitors driver behavior for signs of distraction, fatigue and even anger. Beyond alerts, the thinking is that as emotion AI develops, vehicles may respond by playing a soothing playlist to minimize rage or even taking over control by kicking into autonomous driving mode. It's another way of making the driving experience safer, more comfortable and more personalized, but as with many new advanced driver assistance systems (ADAS), it's likely to drive up the cost and complexity of vehicle repairs.

Enhancing Claims Automation Processes

Certainly, there are places in the claims process that could benefit from a deeper understanding of a person's state of mind or emotions. For instance, in a call center, emotion AI could be used to identify upset customers who could be routed to more experienced customer service representatives. Similarly, it could be used to identify when call center employees are growing tired or struggling to manage an upset customer, then offer support or interventions. According to the Coalition Against Insurance Fraud, fraud comprises about 10 percent of Property & Casualty insurance losses. When added to existing voice analysis tools, emotion AI may one day be an asset to claims organization in minimizing this impact. Of course, this possibility brings with it a host of potential ethical issues, particularly around the quality of the data and accuracy of recommendations, both which I will explore later. For me, though, perhaps the most interesting way emotion AI might be used to better automate claims is through user experience and training applications, where a better understanding of user frustrations and pain points could help guide improvements that streamline and simplify the claims process. This could be useful both in customer-facing applications, so claims organizations could get a better understanding of the customer experience, as well as behind-the-scenes, to better understand adjuster pain points. In this type of use case, rather than replacing human-to-human interaction, as is the intent behind many chatbots, AI is instead augmenting that interaction. Emotion AI can support streamlined claims processes and minimize confusion and frustration, actually making the user experience more natural, more convenient and less stressful—all things that are ultimately more *human*.

Restoring People's Lives

If the higher purpose of Property & Casualty and collision repair is restoring people's lives by returning people injured in an automotive or vehicle accident and ensuring their vehicles are properly and safely repaired, then emotion AI has the potential to support that purpose. Just as emotion AI could be used on-the-job to determine stress levels, anxiety and depression, it could be used post-injury, whether that injury was sustained in an automobile or workplace accident, to monitor the state of mind of the injured party throughout treatment. This is especially relevant in workers' compensation, where there is growing awareness of how mental health issues might delay return to work. In one recent study, almost half of injured workers who participated reported high levels of depressive symptoms one month after their injuries, and half of those people still reported symptoms even six months after their injuries.

The Caveats to Emotion AI

Market Research Future estimates that the global emotion analytics market (analytics derived from emotion AI) will be worth $25 billion U.S. by 2023. Despite potential for rapid growth, the technology is not without potential drawbacks. To start, facial expressions are not the only indicators of state of mind. Body language plays an important role as well, so emotion AI applications that focus only on facial expressions or micro-movements may not be entirely accurate. It may take a combination of technologies and data inputs to effectively determine state of mind. Emotions are subjective, and the way people express them varies broadly across cultures, and even from individual to individual. This makes emotion AI particularly susceptible to a challenge that affects many AI applications—algorithmic bias. A study reported on by the Harvard Business Review suggests that emotional analysis technology is more likely to assign negative emotions to people based on ethnicity, something that could have serious consequences in high-stakes applications like assessing mental health.

Emotion AI—Augmenting Human Intelligence and Interactions

Much like other applications of artificial intelligence, the value of emotion AI lies in augmenting human intelligence and human interactions, not replacing humans. Emotion AI has the potential to help prevent automobile and workplace accidents, to streamline the claims process in the event that an accident occurs, and to enhance the delivery of care after an accident or injury. In terms of claims automation, it may help claims organizations connect and respond more quickly to the emotional sensitivities of their customers, all who are experiencing a stressful life event. And that is about as humane as claims automation can be. ***This article also appears in Carrier Management.***

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