

Autonomous data leverages AI to predict and prevent problems, and more

How artificial intelligence (AI) and machine learning are helping companies to make the most of their data.

Sensors embedded into Internet of Things products, mobile devices and better management of IT processes are ensuring that almost everything that happens in the physical world is captured digitally. In other words, data is everywhere, and we are creating more of it than ever before.

It is up to businesses to make the most of this data. To do so, they need to move towards a behaviour-driven approach, says Dave Russell, vice-president of enterprise strategy at Veeam, a global data management firm.

“Data-driven behaviour means trying to learn from more data points, data points that might be outside of a specific domain,” Mr Russell says. This means that businesses should not only be looking at their own area of expertise. Data that they can access from other industries may help to make forward-looking decisions.

Key to this approach is the progression of machine learning, a sub-field of AI. The technology has exploded in recent years as computing power and algorithmic advancements have enabled improvements. Machine learning is in essence a sophisticated way to analyse large datasets and recognise patterns. Decisions can then be made based on the patterns that have been detected.

Online food retailer Ocado has harnessed machine learning to detect order fraud, while Virgin Holidays uses it to create subject lines for marketing messages. In healthcare, advancements have allowed machine learning to be used to analyse medical scans. Mr Russell says that cybersecurity is increasingly an area where machine learning can be applied; for instance, UK startup Darktrace scans firms’ networks and uses AI to detect unusual behaviour.

Mr Russell believes that data will become self-managing and self-learning in the future. Automated data systems, for instance, can help



protect themselves from ransomware by locking files from access. “They could go and get copies of the data right now, before they start to see the data or backups flip to an encrypted file type,” he says.

Companies that want to harness the power of automated data must have data systems that are always online. In one example, Veeam helped Hard Rock Hotel & Casino move to a system of automated minibars. When customers consume items from the minibars in their rooms, a virtualised system adds items directly to their room bill. However, if the system were to go down, the hotel chain would not be able to bill customers accurately and would lose a huge amount of money. The reliability of Veeam’s data management systems, including consistent backups, made the switch to automation possible.

As data management systems become more sophisticated and autonomous, data use will become increasingly proactive, rather than reactive. Developments in machine learning also make it possible to use historical data. This means, for example, that retailers—if they have proper backups—can revisit historical shopping patterns to predict demand for products at certain times of the year.

Companies will also be able to use data from areas outside their traditional expertise. For example, says Mr Russell, if a weather forecast were to show that a hurricane is approaching a certain area, systems should be able to see that there is a potential threat and move data to another location—either to the cloud or directly to another physical data centre. “Now we can start to move data ahead of time,” Mr Russell says. “Reaction is good, but what if you could avoid the storm all together.”

As systems move towards becoming more intelligent and autonomous, making companies more efficient, their reliability will be crucial. If a system fails, then it can have severe consequences for an entire business. In our always-on world, this is truer than ever.