



Artificial Intelligence

Has a 70 year old idea come of age? – by Jackie Down

The quest for artificial intelligence (AI) began over 70 years ago, with the idea that computers would one day be able to think like us. Ambitious predictions attracted funding, but after a few decades, there was little to show for it.

But in the last 25 years new approaches to AI, coupled with advances in technology, have meant that we may now be on the brink of realising those dreams. The term AI can be confusing. We all know there's never any shortage of buzzwords in the IT world, but when it comes to Artificial Intelligence, machine intelligence, machine learning they can be hard to tell apart. Artificial Intelligence is basically an umbrella term for them all! Artificial intelligence refers to "a broad set of methods, algorithms and technologies that make software 'smart' in a way that may seem human-like to an outside observer,"

Artificial Intelligence is today replying to our emails on Gmail, learning how to drive our cars, and sorting our holiday photos. The problem with the concept of "artificial intelligence" is that people conjure images of supercomputers that operate spaceships like the Star Ship Enterprise or robots policing our cities, rather than particularly clever spam filters, or digital assistants like Cortana, Google Now and Siri.

Let's take a look at a couple of AI applications that are here today:

Smart Home Devices

Many smart home devices now help you save money by including the ability to learn your behaviour patterns and adjust the settings on your thermostat or other appliances in an effort to increase convenience and save energy. For example, turning your oven on when you leave work instead of waiting to get home is a very convenient ability. A thermostat that knows when you're home and adjusts the temperature accordingly and turning the temperature down when you are not at home thus saving you money.

The Nest thermostat uses basic AI to "learn" your habits so that it can automatically turn down the heating when you leave the house and – more cleverly – turn it on an hour before you come back from work.



Online Customer Support

Many websites now offer customers the opportunity to chat with a customer support representative while they're browsing—but not every site actually has a live person on the other end of the line. In many cases, you're talking to a rudimentary AI system. Many of these chat support "bots" amount to little more than automated responders, but some of them are actually able to extract knowledge from the website and present it to customers when they ask for it.

Virgin Trains uses artificial intelligence software to handle customer queries and phone calls. It also reads every customer email and understands them enough to sort them into one of 470 categories. In the future, it will even send them to the right people across the office. It will take a look at what you have said, how you have said it, the order of the words, the words you have used, what comes before and after those words. What makes it clever is that it learns from its mistakes. Virgin staff are teaching it so it doesn't make the same errors again and in that way it learns like a human. The more it sees, the more it learns. The more it associates with what it has seen in the past the more accurate it will become. It has cut the time spent opening and sorting emails by 85%!

Summary

Our smartphones, our cars, our banks, and our houses all use artificial intelligence on a daily basis; sometimes it's obvious what it is doing, like when you ask Siri to get you directions to the nearest coffee shop. Sometimes it's less obvious, like when you make an abnormal purchase on your credit card.

Don't worry, AI will not replace humans the near future. But it would be nice to have a robot which could do all those household chores! Mark Zuckerberg, the Facebook founder, announced that he was going to dedicate his spare time to building a "simple AI", similar to Jarvis, the robotic butler in Iron Man. "I'll start teaching it to understand my voice to control everything in our home – music, lights, temperature and so on, he says.

