THE BUSINESS IMPACT
OF DEEP LEARNING EVOLUTION

PRO MÉXICO
Trade and Investment

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Artificial Intelligence (AI) is the simulation of human intelligence processes by means of machines. In recent years, it has evolved quickly, going from being a mere scientific research concept discussed in laboratories around the world to being object of practical work with clearly defined and stated uses and applications in different business fields.

One of the domains that make up AI is Deep Learning, which entails developing computer systems and programmes capable of handling data and converting it into useful, knowledge-building information without human intervention.

This type of artificial intelligence emulates human learning. There are different automatic learning managing platforms such as IBM Watson, Amazon Machine Learning, Azure Machine Learning and TensorFlow which are able to develop business applications tailored to the needs of companies interested in this type of solutions.

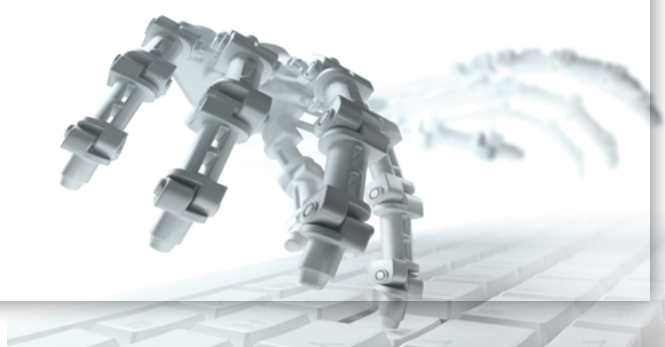
In the past, much of the progress made in this area had been of little use due to the existing technological constraints at the time. However, the latest advances in neuroscience, as well as computer systems larger processing capacities, Big Data and improvements to online services such as Cloud Computing, have contributed to accelerate the development of systems capable of emulating certain aspects of human thinking and behaviour.

These breakthroughs have enabled the development of several practical applications based on deep learning methods, without which their development would not have been possible, and that are now a part of the day to day of millions of users. Some examples of this are image processing and recognition technologies applied to object, face and/or facial expression identification used in identity verification or even disease detection by means of the automated analysis of images and their comparison with previous versions of them. Another example of deep learning application is voice recognition based on the language recognition features currently used by intelligent personal assistants such as Siri, Cortana, and Google Assistant.

The opportunities for development of deep learning-based products and services include autonomous vehicles; urban traffic and mobility management systems; remote medical diagnosis devices; new materials development; and advanced, multi-language automatic translation systems, which could all be available and ready to use in the near future.

ProMéxico has conducted a series of studies about deep learning applications which, together with new data analysis technologies, will bolster the development of business solutions that will enable industry 4.0 to devise new products and services.

Thus, as part of its research and technology stream, ProMéxico will look for the different opportunities stemming from deep learning, such as quality control cognitive systems or the new human-intervention-free automated production methods.



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