

Efficiency and Reliability in Bringing AI into Transport and Smart City Solutions

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Key Note

Abstract

Artificial Intelligence revived in the last decade. The need for progress, the growing processing capacity and the low cost of the Cloud have facilitated the development of new, powerful algorithms. The efficiency of these algorithms in Big Data processing, Deep Learning and Convolutional Networks is transforming the way we work and is opening new horizons. Thanks to them, we can now analyse data and obtain unimaginable solutions to today's problems. Nevertheless, our success is not entirely based on algorithms, it also comes from our ability to follow our "gut" when choosing the best combination of algorithms for an intelligent artefact. Their development involves the use of both connectionist and symbolic systems, that is to say data and knowledge. Moreover, it is necessary to work with both historical and real-time data. It is also important to consider development time, costs and the ability to create systems that will interact with their environment, will connect with the objects that surround them and will manage the data they obtain in a reliable manner.

In this keynote, the evolution of intelligent computer systems will be examined, especially that of convolutional networks. The need for human capital will be discussed, as well as the need to follow one's "gut instinct" in problem-solving.

Furthermore, the importance of IoT and Blockchain in the development of intelligent systems will be analysed and it will be shown how tools like "Deep Intelligence" make it possible to create computer systems efficiently and effectively. "Smart" infrastructures need to incorporate all added-value resources so they can offer useful services to the society, while reducing costs, ensuring reliability and improving the quality of life of the citizens. The combination of AI with IoT and with blockchain offers a world of possibilities and opportunities.

The development of transport, smart cities, urbanizations and leisure areas can be improved through the use of distributed intelligent computer systems. In this regard, edge platforms or fog computing help increase efficiency, reduce network latency, improve security and bring intelligence to the edge of the network, the sensors, users and the environment.

Several use cases of intelligent systems will be presented, and it will be analysed how the processes of implementation and use have been optimized by means of different tools.

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