

PREFACE

Special issue: Advanced Deep Learning and 5G intelligence connectivity

There are several technological fields that rollout progressive changes globally. Two of them represent the strategic commitment of individual large states. These are 5G technologies and artificial intelligence. The 5G technologies mark the beginning of a new era of high-speed networks, hyper-connectivity, a wide spectrum of new services. It will emphatically affect people, ventures, society, and the economy, changing how we live and work. By the end of 2020, the number of 5G commercial networks has topped 145 globally, leading 5G carriers to see strong 5G uptake and promising financial returns, 5G smartphones continue to improve affordability. The 5G promises a future with industries. It will help that the industry to identify real needs based on specific business scenarios, networks will need to adapt to different scenarios, telecoms operators will need to develop new capabilities to serve business-facing 5G markets and a thriving industrial 5G device ecosystem is key.

On the other hand, we can say that there is a good connection between 5G technology and artificial intelligence. Special emphasis is placed on deep learning. Deep learning methods, such as neural networks (NN), convolutional neural networks (CNN), recurrent neural networks (RNN), long short-term memory (LSTM), etc., are very famous in image processing and time-series inference. Advanced driver assistance frameworks and self-driving vehicles have been developed based on machine learning and deep learning techniques, which are anticipated to have a profound and revolutionary impact on society and the way people commute. Many aspects of daily life are changing and moving permanently. People consume entertainment to the way in which they learn and interact with colleagues, will become much richer and more fulfilled. Augmented reality (AR), and virtual reality (VR) will enhance gaming experiences and be dominant during watching live sports or music events from homes. Virtual personal assistants will manage lives and drones will be used to deliver packages. In this new era, mobile and artificial intelligence will intelligently connect and assist everyone and everything to a better future.

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