

Abstract

In the past few years, artificial intelligence (AI) has been a subject of intense media hype. Machine learning, deep learning, and AI come up in countless articles often outside of technology-minded publications. We're promised a future of intelligent chatbots, self-driving cars, and virtual assistants - the future where human jobs and most of economic will be handled by robots or AI agents.

Media hype has been driven by the recent breakthrough in machine learning mainly in deep learning area. As opposed to task-specific algorithms which requires manual feature engineering, deep learning algorithms allow system automatically discover the representations needed for feature detection or classification from raw data. This allows a machine to both learn the features and use them to perform a specific task.

Deep learning algorithms have been applied to fields including computer vision, speech recognition, natural language processing, audio recognition, machine translation, bioinformatics, drug design, medical image analysis, material inspection and board game programs, where they reached parity and in some cases superior human experts. This has been possible also due to significant increase in compute capacity driven by modern GPUs and Cloud Computing with massive open datasets gathered.

Microsoft has twitted its strategy around AI and focused investments in democratizing AI - building software, tools and services for develops to leverage AI in scientific research and engendering.

During the session we are going to cover current state of deep learning. What has it achieved so far? How significant is it? Where we are headed next? Also we are going to show available tools and services you can start using immediately in day to day research activity.