Machine Learning: Status and Perspectives

Zhi-Hua Zhou

Nanjing University
163 Xianlin Avenue, Qixia District, Nanjing 210023, China

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Machine learning has achieved great success in both research and application during the past decade. It originated as a research branch of artificial intelligence (AI), and becomes the mainstream of current AI research. In this talk, we will briefly introduce the progress and status of machine learning, and discuss on some future perspectives. We will comment on strengths and weakness of deep learning. Then, we will talk about challenges and opportunities introduced by open environment machine learning tasks. Moreover, considering that in its current form of “data + algorithm” machine learning suffers from many weakness or even bottlenecks, we advocate to explore the form of learnware, which is a well-performed pre-trained learning model with a specification explaining its purpose and/or specialty.