

Machine Learning and Biomedical Applications: Promise and Peril

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Abstract

The last decade has seen the transition of machine learning methods from research labs to real-world applications, resulting in very significant improvements in algorithmic performance in areas such as image analysis, speech recognition, and natural language processing. A major contributor to this “revolution” has been deep learning. In this talk we will briefly review some of the key concepts in deep learning and some of the factors in its success. We will also discuss some of the potential limitations of deep learning in the context of applications in healthcare, including topics such as robustness to distribution shift and calibration.