Generalizing from Few Examples with Meta-Learning

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Abstract

Deep learning has been successful at many AI tasks, largely thanks to the availability of large quantities of labeled data. Yet, humans are able to learn concepts from as little as a handful of examples. I'll describe a framework that has recently been used successfully to address the problem of generalizing from small amounts of data, known as meta-learning. In meta-learning we develop a learning algorithm that itself can produce and train a learning algorithm for some target class of problems. I'll review some examples of successful use of meta-learning to produce good few-shot classification algorithms.