Interactive Algorithms for Machine Learning

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Abstract

Traditionally machine learning problems are categorized as either supervised or unsupervised. In an unsupervised problem like clustering, the goal is to look for patterns from raw data without any human input. In supervised learning the goal is to build accurate predictors using limited human input in the form of training data. However, technologies such as crowdsourcing platforms, wearable gadgets, and social media are making it much easier for humans to provide constant feedback and interact with learning algorithms in more sophisticated ways. This motivates the study of new models and algorithms for interactive learning. In this talk I will describe recent progress and challenges in designing theoretical models and algorithms for interactive learning in the context of clustering and classification problems.

Bio

Pranjal Awasthi is an Assistant Professor in the Department of Computer Science at Rutgers University. His research is in theoretical machine learning with a particular focus on designing noise tolerant algorithms for classification, and designing machine learning algorithms for interactive learning.