Data Science Seminar

Hosted by Department of Mathematical Sciences

- Date: Tuesday, April 24, 2018
- Time: 12:05pm – 1:05pm
- Room: WH-100E
- Speaker: Haomiao Meng (Binghamton University)
- Title: Multicategory Angle-based Large-margin Classification

Abstract

Large-margin classifiers are popular methods for classification. Among existing simultaneous multicategory large-margin classifiers, a common approach is to learn k different functions for a k-class problem with a sum-to-zero constraint. Such a formulation can be inefficient. We propose a new multicategory angle-based large-margin classification framework. The proposed angle-based classifiers consider a simplex-based prediction rule without the sum-to-zero constraint, and enjoy more efficient computation. Many binary large-margin classifiers can be naturally generalized for multicategory problems through the angle-based framework. Theoretical and numerical studies demonstrate the usefulness of the angle-based methods.