

Statistics and Data Science Seminar

Model-based approaches to learn partitions from data

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Abstract: In multi-class classification, different classes may relate to different feature groups. In this talk, I will present a class-conditional regularization of the multinomial logistic model to enable the discovery of class-specific feature groups. I will also present an efficient cyclic block coordinate descent based algorithm to solve the model. In another work, I will introduce a novel joint mixture model framework to estimate cluster size distribution, particularly for over-dispersed (high variance) ones, together with cluster compactness (density). Our methods are sufficiently flexible and general to be applied to multiple application domains, such as social networks, image segmentation, natural language processing and bioinformatics.

Wednesday, October 19 at 3:00 PM in SEO 636