BIOSTATISTICS SEMINAR

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Deep Generative Models for Density Estimation and Beyond

Unsupervised generative methods have undergone a recent renaissance. These generative methods yield models that understand data by learning how to generate samples through implicit and explicit likelihood optimization. In this talk I will discuss how to build deep architectures for learning a normalized likelihood in high dimensional settings. In addition, I discuss how to extend these generative models to uncover dependencies in ones data beyond a simple joint likelihood on a static vector. First, I show how to uncover dependencies among features in a vector that are typically opaque in generative models. I show that dependencies these models are useful in complicated data-imputation tasks. After, I propose to learn dependencies among an exchangeable (unordered) set of points. I show that we may apply these dependencies to model spatial point clouds.

Thursday November 14, 2019   **3:30 pm - 4:30 pm**
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