

Structured Regression in Evolving Health Networks

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Predictive modeling in health networks is a challenging problem due to partially observed node attributes and links that often evolve over time. Additional challenges involve presence of multiple types of links among nodes that should be considered jointly where various nodes have different temporal dynamics. In this talk we will present an overview of the results of our ongoing big data project aimed to address some of these challenges by developing effective methods for structured regression with propagating uncertainty in evolving networks. The proposed methods will be discussed in context of applications to predicting admission and mortality rate for high impact diseases at a large number of hospitals.