今 日 演 講

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Generative Distribution Prediction for Multimodal Learning

* 演講地點：統計所 B1 演講廳　　Place：Auditorium, B1F
* 時間：10：30 - 12：00　　　　　Time：10：30 - 12：00
* 茶會時間：10：10 開始　　　　　Tea reception starts at 10：10
* 實體與線上視訊同步進行
  Online live streaming through Cisco Webex will be available.

Abstract

Accurate multimodal prediction—spanning tabular, textual, and visual data—is crucial for advancing analytics across diverse domains. However, traditional models often struggle to integrate heterogeneous data while preserving high predictive accuracy. In this talk, we present Generative Distribution Prediction, a flexible framework that enhances predictive performance through multimodal synthetic data generation, including conditional diffusion models. This framework facilitates transfer learning, adapts to various loss functions for risk minimization, and provides statistical guarantees on predictive accuracy. We empirically validate its versatility and effectiveness across four supervised tasks: tabular data prediction, question answering, image captioning, and adaptive quantile regression.

Joint work with Dr. Xinyu Tian, School of Statistics, University of Minnesota.

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