国家天元数学中部中心

Tianyuan Mathematical Center in Central China

WUHAN UNIVERSITY

Seminar 高性能计算
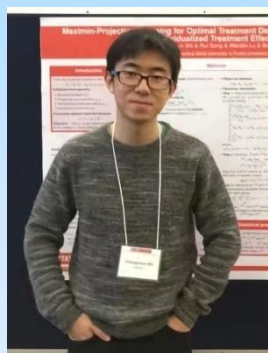
Prof. Chengchun Shi

London School of Economics and Political Science

报告日期： **2022-11-07 14:00 - 15:00**

ZOOMID： **885 517 8417** 密码： **whu2022**

Statistical Inference in Reinforcement Learning

Abstract: Reinforcement learning (RL) is concerned with how intelligence agents take actions in a given environment to maximize the cumulative reward they receive. In healthcare, applying RL algorithms could assist patients in improving their health status. In ride-sharing platforms, applying RL algorithms could increase drivers' income and customer satisfaction. RL has been arguably one of the most vibrant research frontiers in machine learning over the last few years. Nevertheless, statistics as a field, as opposed to computer science, has only recently begun to engage with reinforcement learning both in depth and in breadth. In today's talk, I will discuss some of my recent work on developing statistical inferential tools for reinforcement learning, with applications to mobile health and ridesharing companies. The talk will cover several different papers published in highly-ranked statistical journals (JASA & JRSSB) and top machine learning conferences (ICML).

About the Speaker: Chengchun Shi is an Assistant Professor in data science at London School of Economics and Political Science. He is serving as the associate editors of JRSSB and Journal of Nonparametric Statistics. His research focuses on developing statistical learning methods in reinforcement learning and analysis of complex data, with applications to healthcare, ridesharing and neuroimaging. He was the recipient of the Royal Statistical Society Research Prize in 2021. He also received the IMS travel awards in three years.

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