NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

SPMS Undergraduate Odyssey Talk Series AY2122

Fast Solving of Large-Scale Regression Problems

Asst Prof Li Yi
School of Physical and Mathematical Sciences

Date: 12 November 2021 (Friday)
Time: 4.30pm - 5.30pm
Venue: Zoom
Meeting ID: 925 8706 2263
Passcode: 457330

Abstract

This is an introductory talk on modern algorithms for massive data sets via the lens of regression problems. The talk will cover the basic notions of modern algorithm design and focus on the least-squares regression problem. I will show that a popular technique, called subspace embedding, can greatly accelerate solving the least-squares problem involving large-scale matrices. If time permits, I will discuss more applications of the subspace embedding technique and how to solve efficiently other variants of regression problems. The talk assumes the basic knowledge of linear algebra and a minimum amount of probability.

Biography

Assistant Professor Li Yi is currently an assistant professor in the Division of Mathematical Sciences at Nanyang Technological University. He graduated from University of Michigan, Ann Arbor in 2013, and was a postdoc at the Simons Institute for the Theory of Computing, Max-Planck Institute for Informatics and Harvard University before joining NTU. He mainly works in streaming and sketching algorithms for massive data and compressive sensing and sparse recovery problems.

Stay in touch!
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