JUNTENG JIA

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EDUCATION

Cornell University GPA: 4.10/4.30

Ph.D. in Computer Science; Specialization: Network Science

expected May 2021

o Courses: Advanced Machine Learning, Algorithm Analysis, structure of information networks, etc.

Cornell University

GPA: 4.00/4.30

M.S. in Chemistry; Specialization: High Performance Computing

May 2017

o Courses: Application of Parallel Computers, Matrix Computation, Mathematical Programming, etc.

Nanjing University

GPA: 3.78/4.00

B.S. in Chemistry;

Sept. 2015

RESEARCH PROJECTS

• Neural Jump Stochastic Differential Equations

 $Advisor:\ Prof.\ Austin\ R.\ Benson$

- o Introduced a family of neural networks that simultaneously models discrete and continuous dynamics behaviors
- Achieved state-of-the-art performance for label prediction on temporal event sequence benchmarks
- Edge-Flow Prediction in Flow Networks

Advisor: Prof. Austin R. Benson

- Developed a semi-supervised learning algorithm for predicting edge flow on graphs
- o Proposed two active learning algorithms for "optimal sensor deployment" problem
- Core-Periphery Structure in Spatial Networks

Advisor: Prof. Austin R. Benson

- Introduced a random graph model for modeling core-periphery structure in spatial networks
- o Developed an efficient algorithm for inferring vertex core-scores model parameters associated with vertices
- o Our vertex core-scores outperforms other centrality measures (such as PageRank) on downstream data-mining tasks
- Improving Parallel Efficiency for Quantum ESPRESSO

Advisor: Prof. Robert A. DiStasio

- Implemented a load-balancing algorithm for massively-parallel hybrid density functional theory calculations
- Reduced the CPU idle time using asynchronous MPI communication; achieve an overall 50% performance increase

🋂 Internship & Work Experience

Google Inc.

Data Infrastructure & Analysis (DIA)

Software Engineer Intern

 $Summer\ 2019$

• Built a machine learning model for estimating computational resource usage of curation jobs. Our offline evaluation shows this model would significantly improve the efficiency of curation job scheduler upon deployment.

Cornell University

Teaching Assistant

CS 4220, Numerical Analysis

Spring 2019

Argonne National Laboratory

High Performance Computing

Research Intern

Summer 2016

■ SELECTED PUBLICATIONS

- Random Spatial Network Models for Core-Periphery Structure (WSDM '19) **Junteng Jia** and Austin R. Benson.
- Graph-based Semi-Supervised & Active Learning for Edge Flows (*KDD* '19) **Junteng Jia**, Michael T. Schaub, Santiago Segarra and Austin R. Benson.
- Neural Jump Stochastic Differential Equations (NeurIPS '19) **Junteng Jia** and Austin R. Benson.

SKILLS

• Languages: Python, Julia, Java, C/C++, MATLAB Technologies: Git, MPI, OpenMP, PyTorch, TensorFlow

• Others: Good software engineering principles · Good teamworker · Eagerness to learn · Strong problem-solving skills