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***
  - 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*
  - 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*
  - 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
  - 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
  - Developed an efficient algorithm for inferring vertex *core-scores* — model parameters associated with vertices
  - 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.** *Software Engineer Intern*
  Data Infrastructure & Analysis (DIA) *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** *Research Intern*
  High Performance Computing *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