Junjiang Li

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Education

MSc in Applied Computing September 2021 – December 2022 (Expected)
University of Toronto, Department of Computer Science GPA: 4.00

Registered Courses

- System Modelling and Analysis
- Theory of Distributed Computing
- Topics in Storage Systems
- Statistical Learning Theory
- NN Training Dynamics
- Online Algorithms

Bachelor of Science and BSc in Engineering August 2017 – May 2021
Miami University, Oxford, OH, United States GPA: 3.98
Majors: *Computer Science*, *Mathematics*, and *Physics*

Additional Courses

Machine Learning, Hsuan-Tien Lin September 2021–December 2021
Deep Learning (CS230), Andrew Ng January 2022 – Present
Natural Language Understanding (CS224U), Christopher Potts January 2022 – Present

Experiences

Computer Modelling Research Lab, Department of Computer Science, Miami University May 2020 – May 2021
Student Researcher

- Constructed a simulation orchestration software using Python to run large-scale epidemiological simulations on multiple Azure compute nodes in parallel, accelerating the progress by over 10 times.
- Implemented vaccination logic to open-source agent-based COVID-19 models, allowing us to explore the effect of different vaccination strategies on the dynamics of the spread of COVID-19.
- Analyzed large amounts of simulation data using custom written scripts with results published in two papers.

Bose-Einstein Condensates (BEC) Research Lab, Dept. of Physics, Miami University October 2017 – May 2019
Student Researcher

- Built numerical simulations of the fast adiabatic transport of BECs to identify interesting problems that are worth studying with physical experiments.
- Created software that helped determine the configurations of critical experimental apparatus, saving thousands of dollars in material cost and hundreds of hours of manual labour if physical experiments were performed instead.

Technical Skills

- Languages and Tools: Java, C++, C#, Python, SQL, Git
- Scientific Packages: NumPy, scikit-learn, TensorFlow
- Cloud Computing: AWS, Azure
- Strong grasp of data structures and algorithms

Publications

- Li J. and Giabbanelli P.J., "Returning to a Normal Life via COVID-19 Vaccines in the United States: A Large-scale Agent-Based Simulation Study", *JMIR Med Inform*, 2021, doi: 10.2196/27419.
- Li J. and Giabbanelli P.J., "Identifying Synergistic Interventions to Address COVID-19 Using a Large Scale Agent-Based Model", *ICCS 2021*, 2021, pp. 655-662, doi: 10.1007/978-3-030-77967-2_54.

Awards

- Outstanding Poster Award at the OSAPS physics conference (1 recipient) Fall 2019
- Pi Mu Epsilon Prize for placing 1st in a school-wide mathematics contest Dept. of Mathematics, Spring 2019
- R. L. Edwards Scholarship (1 recipient based on academic merit) Dept. of Physics, Fall 2020
- Osmond Barton Prize for outstanding senior in Mathematics (1 recipient) Dept. of Mathematics, Spring 2019
- George and Carolyn Arfken Scholarship (1 recipient based on academic merit) Dept. of Physics, Spring 2019
- Top 10 Award (ranked by GPA of majors in the College of Engineering and Computing) Spring 2019