

JIWON CHANG

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RESEARCH INTEREST

I am interested in solving algorithmic problems in data management for AI/ML. In particular, I study query algorithms with complex objectives such as downstream training accuracy and diversity, or model-guided scoring. I tend to work with randomized algorithms and mathematical optimization.

EDUCATION

University of Rochester

2023–Present

Ph.D. in Computer Science

Rochester, NY

- Advisor: Fatemeh Nargesian
- Coursework: Data Management Systems, Machine Learning, Sampling Algorithms, Compilers

University of Rochester

2018–2022

B.S. in Computer Science

Rochester, NY

- Coursework: Research Seminar, Data Mining, Artificial Intelligence, Algorithm Design

PUBLICATIONS

PLUTUS: Understanding Distribution Tailoring for Machine Learning (Demo)

J. Chang, C. Dionysio, F. Nargesian, M. Boehm. SIGMOD 2024.

Data Distribution Tailoring Revisited: Cost-Efficient Integration of Representative Data

J. Chang, B. Cui, F. Nargesian, A. Asudeh. H.V. Jagadish. VLDBJ 2024.

CoolerLang: A Language For Physically Correct and Computationally Efficient Color Programming (Under review)

E. Chen, J. Chang, Y. Zhu. 2024.

PROFESSIONAL EXPERIENCE

University of Rochester

2023

Research Assistant

Rochester, NY

- Conducted computer science research at the Data Intelligence Lab and the Horizon Lab.
- Lead the Data Distribution Tailoring Revisited project.
- Assisted equality saturation implementation and paper writing for the CoolerLang project.

BusySquirrels Company

2021

Full-Stack Web Developer Intern

Remote

- Improved BusySquirrels Shopping Tips browser extension's UI with React.js.
- Streamlined IndexedDB database queries for the browser extension.

- Implemented analytics across the product suite to track customer engagement.

Freelance

2018–2022

Private Physics Tutor

Remote

- Taught the International Baccalaureate (IB) HL Physics curriculum.

GRANTS

- **Schwartz Discover Grant for Undergraduate Summer Research.** Data distribution tailoring revisited. \$5000. 2022.

PRESENTATIONS

- **Graduate Research Symposium.** Approximately answering arbitrary top- k queries. 2024.
- **UR Computer Science Open House.** Data distribution tailoring revisited. 2023.

ACTIVITIES

Campus Times

2020–2022

Opinions Writer

- Contributed opinion articles on technology and STEM education.
- Interviewed and reported CS undergraduates' sentiments on the curriculum

PROFESSIONAL AFFILIATIONS

- Association for Computing Machinery (ACM)
- Special Interest Group in Management of Data (SIGMOD)

SKILLS

- **Programming languages:** Python, Javascript, Java, Go, Rust
- **Tools & frameworks:** Tensorflow, pandas, scikit, React.js, git & Github, AWS, SystemDS
- **Databases:** MongoDB, PostgreSQL, DynamoDB