

JIWON CHANG

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RESEARCH INTEREST

I study algorithmic problems in data management for ML with a focus on two topics. The first is data acquisition for improving downstream objectives, such as performance and group fairness. The second are queries where certain clauses are given by models. The two problems are synergistic: data acquisition tasks are often latter types of queries. In terms of technique, I frequently work with stochastic discrete optimization.

EDUCATION

University of Rochester

2023–Present

Ph.D. student in Computer Science

Rochester, NY

- Advisor: Fatemeh Nargesian
- Coursework: Data Management Systems, ML Systems, Optimization Theory, Machine Learning

University of Rochester

2018–2022

B.S. in Computer Science

Rochester, NY

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

PUBLICATIONS

CoolerSpace: A Language for Physically Correct and Computationally Efficient Color Programming

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

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.

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.

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