

Jiwon Chang

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EDUCATION

B.S. in Computer Science
University of Rochester
GPA: 3.36

Rochester, NY
Aug 2018 – Dec 2022

Relevant coursework: Undergraduate Research Seminar, Data Mining, Design & Analysis of Algorithms, Artificial Intelligence, Data Structures & Algorithms, Linear Algebra, Probability Theory

RESEARCH EXPERIENCE

Department of Computer Science, University of Rochester

Data Intelligence Lab

Nov 2021 – Present

Advisor: Fatemeh Nargesian

Data-Centric Coreset Generation with Fairness Constraints, manuscript: Researched methods to efficiently produce a coreset that summarizes the original dataset under coverage and fairness constraint. Proved the problem's reduction to k -tuple total domination in graphs. Applied and analyzed distributed submodular set function optimization algorithms. Proposed and studied a bandit-based approximation algorithm. Helped implement the data processing pipeline for experiments.

Further Results on the Data Distribution Tailoring Problem, manuscript: Designed algorithms to efficiently collect a dataset that adequately represents groups of interest. Proved that existing coupon collector-inspired algorithm is suboptimal and proposed a new heuristic which outperforms the previous algorithm with tighter asymptotic guarantee. Generalized existing bandit-based algorithm. Proved the asymptotic optimality of the generalized algorithm with reward function dependent on unknown probabilities.

Department of Computer Science, University of Rochester

Mobile Visual Computing

Aug 2021 – Dec 2021

Advisor: Yuhao Zhu

Single Exposure Fusion, course project: Proposed a method of restoring a high dynamic range (HDR) image from a single low dynamic range (LDR) photograph. By combining ML image restoration algorithms and Mertens' exposure fusion method, demonstrated an improvement in perceptual dynamic range while minimizing image degradation from overexposure and underexposure.

GRANTS & AWARDS

- Discover Grant for Undergraduate Summer Research

May 2022 - Aug 2022

PROFESSIONAL EXPERIENCE

BusySquirrels Company

Full-stack web developer intern

Remote

May 2021 – Aug 2021

BusySquirrels is developing a platform to help online shoppers save money and time by providing cashback, price tracking, real-time price drop, and restock alerts and cross-store price comparison.

- 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

Private physics tutor

Remote

Aug 2018 – Feb 2022

- Taught a number of students the International Baccalaureate (IB) HL Physics curriculum.

CAMPUS ACTIVITIES

Campus Times

Opinions Writer

University of Rochester

Oct 2020 – Sep 2022

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

PROFESSIONAL AFFILIATIONS

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

SKILLS

- **Programming languages:** Python, Javascript, Java, \LaTeX
- **Tools & Frameworks:** Pandas, scikit, ResNet, React.js, git & Github, AWS, Jekyll, Linux
- **Databases** DynamoDB, IndexedDB, SQL
- **Soft skills:** Collaborative research, persuasive writing, teaching
- **Languages:** Native-level English and Korean, professional-level Mandarin