

Xintong Li

PH.D. STUDENT @ CS, UC, SAN DIEGO

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EDUCATION

University of California, San Diego

PH.D. IN COMPUTER SCIENCE

Sep 2023 - Present

Advised by Prof. Jingbo Shang;

University of Wisconsin, Madison

B.S. IN COMPUTER SCIENCE & DATA SCIENCE;

Sep 2019 - May 2023

Distinctive Scholastic Achievement; **GPA: 3.94/4**

RESEARCH INTERESTS

Natural Language Processing • Weak Supervision • Automated Machine Learning

My research interest is efficient machine learning, especially weak supervision and AutoML. I am eager to come up with new ideas to help reduce the need for expensive labeled data. I am also working on broadening the scope of machine learning methods toward the long tail of diverse and under-studied application fields.

PAPERS & PRE-PRINTS

* Equal Contribution

[2] Escaping Label Subspaces via Label Geometry

Nicholas Roberts, Xintong Li, Dyah Adila, Sonia Crompt, Tzu-Heng Huang, Jitian Zhao, Frederic Sala
Conference on Neural Information Processing Systems(NeurIPS), 2023.

[1] AutoWS-Bench-101: Benchmarking Automated Weak Supervision with 100 Labels

Nicholas Roberts*, Xintong Li*, Tzu-Heng Huang, Dyah Adila, Spencer Schoenberg, Cheng-Yu Liu, Lauren Pick, Haotian Ma, Aws Albarghouthi, Frederic Sala
Conference on Neural Information Processing Systems(NeurIPS), 2022.

PROFESSIONAL EXPERIENCE

University of Wisconsin-Madison

Madison, WI, USA

UNDERGRADUATE RESEARCH ASSISTANT

Feb 2022 – May 2023

Worked with Prof. Jelena Diakonikolas on Non-Convex Optimization.

- Used potential function-based framework to study the convergence of adaptive gradient descent methods.
- Extended to non-convex and local smoothness case to search for better convergence rates.

Wisconsin Natural Resources Institute

Madison, WI, USA

TEAM LEAD

Sep 2021 – May 2022

Worked with Prof. Tyler Caraza-Harter on Deer Data Prediction by Land Cover Features.

- Structured observations and built new columns to map professional and volunteer datasets together.
- Compared p-value with uncertainty using Fisher model to eliminate outliers in the datasets.

University of Wisconsin-Madison

Madison, WI, USA

UNDERGRADUATE RESEARCH ASSISTANT

Dec 2020 – May 2023

Worked with Prof. Frederic Sala on Weak Supervision and Foundation Models.

- Implemented plug-and-play combinations of feature representations and automatic label function generation and selection framework.
- Incorporated the geometric relationship of label spaces in order to learn in partially observed label spaces of extremely high cardinality.

SELECTED HONORS & AWARDS

2023-2024 UCSD Jacob School of Engineering Fellowship
2022 NeurIPS Scholar Award
2022 Wisconsin Science and Computing Emerging Research Stars (exploreCSR award)
2020-2022 UW–Madison Dean’s List

LEADERSHIP & ACTIVITIES

Team Member

DATA SCIENCE RESEARCH GROUP

UW-Madison

2021–2023

Team Member

UW-MADISON SOCIETY OF WOMEN ENGINEERS

UW-Madison

2021 – 2022

Team Member

UNIVERSITY HOUSING

UW-Madison

2020

TECHNICAL SKILLS

Coursework: Machine Learning, Deep Learning, Nonlinear Optimization, Operating Systems, Database, Data Modeling, Algorithm, Natural Language Processing, Foundation of Data Science, Web Mining and Recommender Systems, Probabilistic Reason and Learning

Programming Language: Java, C++, Python, C, R, Assembly language

Web Programming Knowledge: JavaScript, HTML, CSS, JavaFX

Tools: Pandas, Pytorch, TensorFlow, Scikit Learn, SQL, Scipy, Numpy