

Rem Yang

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Education

University of Illinois Urbana-Champaign

Bachelor of Science in Computer Science

Advisors: Sasa Misailovic, Gagandeep Singh, Deepak Vasisht

May 2023

GPA: 4.0/4.0

Research

CONFERENCE PAPERS AND PREPRINTS

- [1] **Provable Defense Against Geometric Transformations**
Rem Yang, Jacob Laurel, Sasa Misailovic, and Gagandeep Singh
Accepted at International Conference on Learning Representations (**ICLR**) 2023, *notable top 25%*
- [2] **Multi-Modal Self-Supervised Learning for Satellite Image Time Series**
Jayanth Shenoy*, Rem Yang*, Han Zhao, and Deepak Vasisht (* denotes equal contribution)
Submitted to IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2023
- [3] **A General Construction for Abstract Interpretation of Higher-Order Automatic Differentiation**
Jacob Laurel, Rem Yang, Shubham Ugare, Robert Nagel, Gagandeep Singh, and Sasa Misailovic
ACM SIGPLAN Conference on Object-oriented Programming, Systems, Languages, and Applications (**OOPSLA**) 2022
- [4] **A Dual Number Abstraction for Static Analysis of Clarke Jacobians**
Jacob Laurel, Rem Yang, Gagandeep Singh, and Sasa Misailovic
ACM SIGPLAN Symposium on Principles of Programming Languages (**POPL**) 2022
- [5] **Statheros: Compiler for Efficient Low-Precision Probabilistic Programming**
Jacob Laurel, Rem Yang, Atharva Sehgal, Shubham Ugare, and Sasa Misailovic
ACM/IEEE Design Automation Conference (**DAC**) 2021

POSTERS

- [6] **Federated Machine Unlearning**
Rem Yang, Supriyo Chakraborty, and Parijat Dube
Illinois Scholars Undergraduate Research (**ISUR**) Expo 2022

Research papers and posters are available on [my personal webpage](#).

Teaching and Work Experience

CS 225 Data Structures

Course Assistant

UIUC

Aug 2020 – May 2021

- Explained data structures concepts and addressed student questions during weekly lab sections
- Held weekly office hours to help students on programming assignments

CS 126 Software Design Studio

Course Assistant

UIUC

Jan 2020 – May 2020

- Led weekly code reviews, facilitating project presentations and discussions of best practices in program design, style, and testing
- Graded five students' weekly projects, with emphasis on detailed and individual feedback

- Developed React Native app that controls the company's bionic arm; deployed on Android and iOS
- Programmed interface for changing robotic hand's grips and toggles

Awards

CRA Outstanding Undergraduate Researcher Award 2023 Honorable Mention: nominated by home department and selected by the Computing Research Association in recognition of outstanding research

SIGPLAN PAC Travel Grant: funding for attending PLMW and POPL 2022

C3SR-URAI Scholar: selected for Spring 2022 project collaboration with IBM researchers

Leadership

Illinois Computer Science Sail
Tech Team Advisor

UIUC
Jul 2020 – May 2021

- Mentored tech team of Sail, an annual outreach event where high school students attend CS classes taught by UIUC students
- Deployed new website to Apache server and set up MySQL database

Tech Team Lead

Nov 2019 – Jun 2020

- Created new website from scratch with Django, which streamlined teacher course creation, student registration, and administrative tasks like mass-mails and event check-in; used by 300+ high school and 100+ college students
- Co-organized Sail 2020 with team of twelve; managed website and event registration logistics

Developer Student Club
Outreach Staff Member

UIUC
Nov 2019 – May 2020

- Prepared lessons and labs for Google technologies, such as Firebase and Flutter, with team of five
- Led an Introduction to Flutter workshop, presented to 20 members