Savitha Ravi

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Education

University of California, San Diego September 2023
Ph.D in Computer Science and Engineering *La Jolla, California*
The Ohio State University August 2019 – May 2023
B.S. in Computer and Information Science, B.S. in Mathematics (Honors), GPA: 3.88 *Columbus, Ohio*

Research Experience

Coblenz Lab September 2023
UCSD *PI: Michael Coblenz*

- Current work: combining AI-based approaches with formal specification techniques using property-based testing (PBT) to better specify and test properties of graphical user interfaces. We are developing a specification language that incorporates temporal logic to describe properties of interaction, in addition to other state-based properties. AI agents will use this specification language to help users specify and test their programs.
- Savitha Ravi and Michael Coblenz. 2026. SPINACH: Inferring Properties of Web Applications for Property-Based Testing. In Proceedings of the 1st International Workshop on Specification-Driven Development Life Cycle (SpecOps '26). Association for Computing Machinery, New York, NY, USA, 10–13. https://doi.org/10.1145/3842652.3843198
- Corpus study of property based testing in Python; developed formal definitions for property-based tests based on an *intraprocedural dataflow analysis* and assessed their effectiveness using mutation testing
- Savitha Ravi and Michael Coblenz. 2025. An Empirical Evaluation of Property-Based Testing in Python. Proc. ACM Program. Lang. 9, OOPSLA2, Article 412 (October 2025), 27 pages. https://doi.org/10.1145/3764068
- Ran an observational study of Jupyter Notebook use. Was co-first author on the paper in ICSE 2025 and gave the conference presentation.
- Huang, R.L., S. Ravi, M. He, B. Tian, S. Lerner, M. Coblenz, How Scientists Use Jupyter Notebooks: Goals, Quality Attributes, and Opportunities)

SecLab May 2022 – January 2023
OSU *PI: Zhiqiang Lin*

- Worked in a research group focusing on the security of "Super Apps" (ex. WeChat, Baidu, Alipay).
- Worked on creating proof-of-concept attacks on WhatsApp.
- Developed a Whatsapp chatbot to interact with other bots on Whatsapp to determine how much and what kind of private information these bots obtain.

Undergraduate Research Project January 2022 – March 2023
OSU *Advisor: Neelam Soundarajan*

- Developed a generic static taint analysis program in Haskell to detect various security vulnerabilities.
- Received Undergraduate Research Scholarship to pursue this work, presented poster at Denman Undergraduate Research Forum

Work Experience

Teaching Assistant Sept 2024 – Dec 2024, September 2025 – March 2026

UCSD CSE

- Held office hours and graded projects for CSE 291, Usability of Programming Languages
- Held office hours, led laboratory activities and discussion sections for CSE 29, introduction to systems programming.

Precalculus Student Instructional Associate Aug 2021 – Dec 2021, Aug 2022 – May 2023

OSU, Department of Mathematics

- Taught two sections of pre-calculus recitation each semester.
- Held office hours, graded exams and quizzes, and tutored students.

Software Engineering Intern Jun 2020 – Aug 2020, Jun 2021 – Aug 2021

Immuta

- Built a Kubernetes custom controller for an Immuta Instance custom resource to manage state.
- Controller performed an install and uninstall of an Immuta instance and recreated missing resources when required.
- Added OpenIDConnect and OAuth2 authentication and authorization requirements to Flask/Angular web apps.
- Altered access to web apps' APIs according to user authorization.
- Helped develop an application for identity and user management.

Software I Grader January 2020 – May 2020

OSU, Department of Computer Science and Engineering

- Assisted professor in labs and answered students' questions.
- Graded and provided feedback on homework and projects.
- Met with students individually to go over difficult concepts from class.

Other Experience

GradWiC President August 2025-Current

UCSD

- Lead board meetings and organized collaborations between GradWIC, various companies, and other campus clubs.

Artifact Evaluation Committee Member August 2024

OOPSLA 2024

- Evaluated artifacts submitted to the OOPSLA 2024 conference.

Mentorship Co-Chair for GradWiC August 2024-June 2025

UCSD

- Managed a mentorship program of 274 graduate students, focusing on mentoring those from underrepresented backgrounds.

MAE Graduate Student Mentor November 2023 – June 2024

UCSD

- Mentored an undergraduate women in the computer science to help her get started in a research lab.

CRA UR2PhD Graduate Student Mentor September 2023 – December 2023

UCSD

- Mentored three undergraduate women in the computer science on a research project.
- Helped mentees develop a VSCode extension for the Rust language to collect telemetry information.

SPLASH Student Volunteer October 2023, 2024, 2025

- Volunteered at the SPLASH 2023, 2024, 2025 conferences.

Awards & Honors

OOPSLA/ISSTA SRC 2nd place
Graduate *2026*

Buckeye Capture the Flag Security Competition 3rd place
OSU *2021, 2022*

Undergraduate Research Scholarship
OSU *2021*

STRIDE Scholar
Smith College *2018-2019*