

CYNTHIA RICHEY

(803) 361-8999 ◊ gannet@cs.washington.edu ◊ thia.codes

EDUCATION

Master of Science in Computer Science September 2023 - June 2024
Paul G. Allen School of Computer Science & Engineering, University of Washington

Bachelor of Science in Computer Science 2019 - June 2023
Paul G. Allen School of Computer Science & Engineering, University of Washington

RESEARCH EXPERIENCE

Certora Inc. June 2023 - September 2023
Research Intern

Developing mutation testing and equality saturation applications under Dr. Chandrakana Nandi.

Paul G. Allen School of Computer Science & Engineering March 2022 (*ongoing*)
Research Assistant

Conducting research on rewrite synthesis using equality saturation, advised by Zachary Tatlock and Anjali Pal.

PRESENTATIONS & POSTERS

What is a “Good” Ruleset? Comparing Rulesets Using Equality Saturation
ICFP Student Research Competition (2023)

Renumo: Equality Saturation Theory Exploration à la Carte
Allen School Undergraduate & Master’s Research Showcase (2023)

SlideRule: Programmable Theory Exploration for Automatic Rewrite Synthesis
Allen School Annual Research Showcase (2023)

WORK EXPERIENCE

AT&T June 2022 - September 2022
Software Engineer Intern

- Intern on the TDP tools team, working with technologies such as Java, JavaScript, Spring Boot, and React.
- Processed tickets from beginning to end, both alone and as part of a team; reviewed pull requests.

Paul G. Allen School of Computer Science & Engineering March 2022 - June 2022
Teaching Assistant

- Teaching assistant for CSE 341: Programming Languages, which covers functional programming paradigms and program interpretation in OCaml and Racket.
- Contributed substantially to the development of new assignments; documented, refactored, and extended course materials (including a series of fuzzers for testing students’ interpreters); managed grading; held office hours; taught a weekly lecture.

Geneial June 2021 - March 2022
Software Engineer Intern

- Created a proof of concept supporting exact-match querying of an encrypted genomic database, using Google’s open-source homomorphic encryption (HME) transpiler.
- On the basis of my work, Geneial secured a contract with a leading American medical university to work HME technologies into their data pipeline.

- As an official employee of the UW Math Department, tutored students in precalculus and calculus.

HONORS & AWARDS

Dreama Frost Endowed Scholarship, Leo Maddox Foundation Scholarship, Burkhardt Family Endowed Scholarship

SKILLS

Languages & Technologies	Rust, Java, C, C++, Linux, Git, OCaml, Racket, Coq JavaScript, Python, random DSLs my advisor writes
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