Ian McCormack

Carnegie Mellon University ● Software and Societal Systems (S3D) ● Pittsburgh, PA, 15213

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EDUCATION

Ph.D. in Software Engineering, Carnegie Mellon University *September 2021 - Present*
- Coadvised by Jonathan Aldrich and Joshua Sunshine
- 2024 CyLab Presidential Fellowship 2024-2025
- National Science Foundation Graduate Research Fellow (NSF GRFP) 2021-2026

University of Wisconsin-Eau Claire *summa cum laude, May 2021*
- **B.S.**, Computer Science
- **B.A.**, English, Rhetorics of Science, Technology, and Culture
- **Minor**, Mathematics

PUBLICATIONS

A Study of Undefined Behavior Across Foreign Function Boundaries in Rust Libraries
Ian McCormack, Joshua Sunshine, Jonathan Aldrich
ICSE, 2025.

A Mixed-Methods Study on the Implications of Unsafe Rust for Interoperation, Encapsulation, and Tooling
Ian McCormack, Tomas Dougan, Sam Estep, Hanan Hibshi, Jonathan Aldrich, Joshua Sunshine.
Preprint, 2024.

Gradual C0: Symbolic Execution for Efficient Gradual Verification
Jenna DiVincenzo, **Ian McCormack**, Hemant Gouni, Jacob Gorenburg, Mona Zhang, Conrad Zimmerman, Joshua Sunshine, Éric Tanter, Jonathan Aldrich.
TOPLAS, 2025.

TickTalk - One Program to Rule the Intersection - 🏆 *(2nd)*
Reese Grimsely, Edward Andert, **Ian C. McCormack**, Eve Hu, Bob Iannucci.
CPS-IoT Week 2021, Student Design Competition: Networked Computing on the Edge.

A Software Library Model for the Internet of Things
Ian McCormack
SPLASH SRC, 2020.

EXPERIENCE

Student Co-Director, Carnegie Mellon University's REUSE Program *August 2024 - Present*
- Assisted with data collection and analysis to support an application for a continuing grant from the National Science Foundation to remain an actively-sponsored summer research site.

Research Assistant, Carnegie Mellon University's REUSE Program *June 2020 - May 2021*
Mentors: Bob Iannucci, Jonathan Aldrich
- Explored and prototyped a novel software repository system to allow combining disjointly-versioned modules.

- Implemented a networking layer for the TTPython distributed programming framework to support an autonomous vehicle intersection that won 2nd place in the 2021 CPS-IoT Week's Student Design Competition.

Technology Intern, Travelers Insurance, St. Paul, Minnesota *June - August, 2019*
Mentor: Mikko Niemioja
- Solved ongoing issues with configuring production environments by creating a .NET application to allow partial backup and restoration of Windows Registry configurations.

- Identified employees' shared frustrations with onboarding and provisioning and used Angular to create a wireframe application that would improve the experience for new hires.