SAM WILLIAMS

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EDUCATION

University of Southern California **Aug. 2022 – Current**
Doctor of Philosophy in Computer Science
GPA: 4.0 / 4.0

University of Colorado Boulder **Aug. 2018 – May 2022**
Bachelor of Science in Computer Science **Summa cum laude, with Honors**
GPA: 4.0 / 4.0

Awards & Honors: Chancellor's Recognition Award, Mackison Writing Award, Wozniak Scholarship.

RESEARCH

Graduate Research Assistant **Aug. 2022 – Current**
University of Southern California
- Game-theoretic models of autonomous intersections.
- Potential games on cubic splines for multi-agent motion planning of autonomous eVTOL.

Undergraduate Volunteer **Feb. 2021 – May 2022**
University of Colorado Boulder
- Software improvements to an agile autonomous vehicle.
- Volunteered under the supervision of a Ph.D. student in the ARPG research group.

PROFESSIONAL EXPERIENCE

Scientific Software Developer Intern **May 2021 – Aug. 2021**
Stellar Science
- Created code to compute intersections between simple geometric shapes for a satellite simulator.
- Added a GUI and visualization to compute and view resulting intersections in a user-friendly manner.

Scientific Software Developer Intern **May 2020 – Aug. 2020**
Stellar Science
- Constructed a general-purpose C++ Web Framework used in multiple applications.
- Built an asynchronous, multithreaded, high performant HTTP/1.1 server in C++17 using Boost.Beast and Boost.Asio with careful consideration to the HTTP RFC specification to replace a deprecated library.

Undergraduate Software Developer Intern **May 2019 – Aug. 2019**
Terumo BCT
- Customized the operating system for an i.MX8 board using Yocto and implemented an NFS boot environment complete with U-Boot scripts for easy developer integration.
- Investigated the feasibility of attaching an additional board without storage used for streaming video to one of their medical devices.

TEACHING

University of Colorado Boulder

Course Assistant CSCI 2820: Linear Algebra with Computer Science Applications **Spring 2022**
Course Assistant CSCI 3434: Theory of Computation **Fall 2021**

ACADEMIC ACTIVITIES

Presentations

- Adimoolam, A., Saha, I., & Dang, T. (2023, May). Safe Self-Triggered Control Based on Precomputed Reachability Sequences. In *Proceedings of the 26th ACM International Conference on Hybrid Systems: Computation and Control* (pp. 1-12). **HSCC 2023**

Sub-Reviewer

- ACC 2023
- CAV 2023
- CDC 2023