CESAR ARGUELLO

cesar.n.arguello.martinez.gr@dartmouth.edu https://www.carguellom.com

September 2022-June 2027 (expected)

EDUCATION

Ph.D. in Computer Science

Dartmouth College

- Advisor: Dr. David Kotz
- Research area: Security and Privacy in the Lifecycle of IoT for Consumer Environments

B.S. in Physics & Computer Science

University of Florida

- Graduted Cum Laude
- Selected for Honors Program

August 2018-May 2022

Gainesville, FL, USA

Hanover, NH, USA

Industry Experience

Product Development Engineer Intern

Intel Corporation

January 2022-May 2022

Santa Clara, CA, USA

- Designed, developed, and debugged sort test programs for server products.
- Tested, validated, modified, and redesigned circuits to guarantee component margin to specification.
- Analyzed and evaluated component specification versus performance to ensure optimal match of component requirements with production equipment capability.

Research Experience

Graduate Research Assistant

Dartmouth College

January 2023-Present

Hanover, NH, USA

- Maintain a C, C++, and Python codebase for a harmonic radar controller, ensuring optimal performance and reliability for various research applications.
- Design and implement experiments and circuit prototypes for novel applications of harmonic radars in IoT security, focusing on advancing research and practical use
- Develop comprehensive research plans targeting conference and journal publications while actively reviewing and discussing relevant literature on IoT security.

Undergraduate Research Assistant

June 2021-May 2022

Gainesville, FL, USA

- University of Florida
 - Designed and developed experiments to test theoretical frameworks on EM side channel disassembly.
 - Collected, processed, and analyzed EM traces using statistical and machine learning models.
 - Developed research plans leading to the successful completion of project deliverables (publications, presentations, etc.).

PUBLICATIONS

- 1. Cesar Arguello, Beatrice Perez, Timothy J. Pierson, and David Kotz. Detecting Battery Cells with Harmonic Radar. *Proceedings of the ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)*, 2024.
- 2. Timothy J. Pierson, Cesar Arguello, Beatrice Perez, Wondimu Zegeye, Kevin Kornegay, Carl Gunter, and David Kotz. We need a "building inspector for IoT" when smart homes are sold. *IEEE Security & Privacy*, 2024.
- 3. Beatrice Perez, Cesar Arguello, Timothy J. Pierson, Gregory Mazzaro, and David Kotz. Proceedings of the IEEE Military Communications Conference (MILCOM), 2023.
- 4. Cesar Arguello, Hunter Searle, Sara Rampazzi, Kevin Butler. [Poster]: A practical methodology for ML-Based EM Side Channel Disassemblers. *Proceedings of the 2022 Poster Session of the 7th IEEE European Symposium on Security and Privacy*, 2022.

Teaching Experience

Graduate Teaching Assistant Dartmouth College

September 2022-January 2023 Hanover, NH, USA

CS50 - Software Design & Implementation

- Developed and maintained automated grading scripts using Bash and Python to evaluate student assignments.
- Conducted in-depth code reviews for programming projects, providing constructive feedback to enhance code quality, efficiency, and adherence to best practices.
- Held office hours to provide one-on-one mentorship to students on course material and programming projects.

Undergraduate Teaching Assistant *University of Florida*

January 2021-May 2021 Gainesville, FL, USA

CDA3101 - Introduction to Computer Organization

- Assisted student achieved proposed academic goals by leading discussions on lecture material.
- Supported instructors by managing the evaluation of course assignments and providing detailed feedback to students.
- Held office hours to review course material, answer general questions, and provide some assistance on assignments.

SKILLS

Languages: English, Spanish.

Programming: Python, C, C++, LaTex, x86

Frameworks: PyTorch

Software: Microsoft Suite, Git, GDB, Wireshark

Web Skills: HTML5, CSS