# Cesar Arguello

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## Education

**Ph.D. in Computer Science** September 2022-June 2027*(expected)*
***Dartmouth College*** Hanover, NH, USA

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

**B.S. in Physics & Computer Science** August 2018-May 2022
***University of Florida*** Gainesville, FL, USA

- Graduted Cum Laude
- Selected for Honors Program

## Industry Experience

**Product Development Engineer Intern** January 2022-May 2022
***Intel Corporation*** 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** January 2023-Present
***Dartmouth College*** 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 cases.
- 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
***University of Florida*** Gainesville, FL, USA

- 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** September 2022-January 2023
***Dartmouth College*** 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** January 2021-May 2021
***University of Florida*** 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