

Kealyssa Makana Castillo-Martin

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<https://llamakana.github.io>

Education

University of Maryland College Park

Ph.D. Expected 2023

- Ph.D. Student, Computer Science GPA: 3.7
- Research Areas and Interests: Cryptography, Privacy, Machine Learning, Secure Computation.
- Advisor: Jonathan Katz

Reed College

B.A. 2018

- Major: Math and Computer Science GPA: 3.6
- Honors: Phi Beta Kappa; Excellence in Scholarship 2014-2015 & 2017-2018
- Thesis: Bridging Natural Language and SMT Solvers, from Grammatical Framework to SBV
- Advisor: Dylan McNamee

Research Experience

Research Assistant

University of Maryland, 2019-Present

- Currently working on survey projects focusing on Noisy Quantum Density Estimation, the Quantum Random Oracle Model, and Privacy.
- Previously worked on a project with the goal of designing a scalable content determination system that is provably robust to adversarial attempts at perturbing the outcome.
- Advisor: Jonathan Katz

REU-CAAR Undergraduate Researcher

University of Maryland, Summer 2017

- Project: Used PyTorch to implement a self-interactive model trained on Quizbowl Clues. Investigated questions such as information retrieval and efficacy of various loss models in the learning process.
- Implemented reward shaping and reinforcement learning in the model.
- Curated cross-paired database of Gutenberg books, Wikipedia plot summaries, and Amazon book reviews in order to build a dataset similar to Quizbowl clues and expand our own training data for the project.
- Advisor: Hal Daumé III
- Focus: Machine learning, query generation and reformulation, modeling conversation history.

Teaching and Work Experience

Teaching Assistant

University of Maryland, 2018-2019

- Performed regular assistant duties for Algorithms and Cryptology, i.e., hosting weekly office hours, grading assignments and exams.

Web Development Intern

Wieden & Kennedy, Summer 2018

- Began transitioning W&K internal sites from .NET framework to Angular.
- Completed various debugging tasks across internal sites.

Teaching Assistant and Individual Tutor

Reed College, 2016-2018

- Performed regular assistant duties for Intro to Computer Science, Computer Science II, and Algorithms & Data Structures. Programming languages/topics covered included Python, C, functional programming (SML), concurrency (Go), assembly language, and digital logic.
- Directed lab sections and taught group review sessions for Intro to Computer Science and Computer Science II.
- Individual Tutor for Calculus, Computability & Complexity, and the courses listed above.
- Recommended to work as a tutor and TA by Profs. Adam Groce, Jim Fix, and Kyle Ormsby.

Leadership

Cryptography Reading Group Organizer

Maryland Cybersecurity Center, 2019-2020

Student Advisory Board Member

Iribe Initiative for Diversity and Inclusion 2019-Present

- Takes action aimed toward increasing minority enrollment and creating a more inclusive department. Brings student concerns to the attention of the department and working with department representatives to create and enact plans that address those issues.
- Current initiatives in progress are monthly meetings of students and faculty centered around different identity groups, making professional societies and conferences for minorities accessible by providing financial support, and establishing and improving the Peer Mentoring Program.

Individual and Group Mentor

University of Maryland, 2018-Present

- Mentor to women undergraduates, providing guidance and support based on my own experiences for women in both academic and industry paths.

Awards and Honors

AISES Intel Growing the Legacy Scholarship

Intel 2019-2020

AISES VGT an Aristocrat Company Scholarship

VGT 2019-2020

Real World Crypto Travel Grant

IACR 2020

Crypto Travel Grant

IACR 2019

Grace Hopper Conference Scholarship

AnitaB.org 2019

Dean's Fellowship

University of Maryland 2018-2020

National Science Foundation S-STEM Scholarship

Reed College 2015-2018

Japanese Critical Language Scholarship

U.S. Department of State 2016

Other activities

URMD Grad Cohort Member

CRA-Widening Participation 2019, 2020

Women's Grad Cohort Member

CRA-Widening Participation 2019, 2020

Conference on Computer and Communications Security Sub-Reviewer

ACM 2019

Privacy Faculty Summit Participant

Facebook 2019