

Ben Mariano

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Education

University of Maryland, College Park, Maryland 2013-Present

- B.S., Department of Electrical and Computer Engineering, GPA: 3.76
- M.S., Department of Computer Science (Fall 2017 - Present), GPA: 4.0

Research

University of Maryland, College Park, Maryland Winter 2017 – Present
Research Assistant for Dr. Jeff Foster (PLUM Lab)

- Expanding functionality of JSketch, a sketch-based program synthesis software for Java
- Developing and testing new models of the Java Standard Library for synthesis optimization
- Experimenting with new axiomatic programming paradigms for program synthesis

Work Experience

University of Maryland, College Park, Maryland Fall 2017
Teaching Assistant for Advanced Functional Programming with Dr. Niki Vazou

- Helped design homework and lecture material
- Taught lecture on Haskell QuickCheck
- Graded coding homeworks in Haskell and conducted office hours with students

Prime Solutions, Columbia, Maryland Summer 2015, Summer 2016
Software Engineering Intern

- Advanced Persistent Threat Simulator (Summer 2016)
 - Designed, developed, and tested simulation of malicious protocols in C and Python
 - Analyzed and edited Locky ransomware using tools such as IDAPro and x64dbg
- Wi-Fi Traffic Analyzer (Summer 2015)
 - Automated analysis of local Wi-Fi traffic to determine device-specific information
 - Leveraged heuristic methods to create relational networks of devices

Projects / Relevant Coursework

Location Privacy Protocol for Wi-Fi Connected Devices (Python, Java) Fall 2017
Implemented and tested a protocol for anonymizing MAC addresses on a public Wi-Fi network

Imitation Simulation API (Python) Spring 2017
Designed API for configuration of imitation-based simulation experiments

RubeVM and Rube Compiler (OCaml) Fall 2016
Implemented a small object-oriented language on top of a VM for a simple bytecode language

GeekOS (C) Fall 2016
Added piping, forking, signals, per-CPU variables and paging to an existing operating system