ASHLEY CUI

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EDUCATION

Boston University College of Engineering, Boston, MA **September 2016 - May 2020**

Bachelor of Science in Computer Engineering

Relevant Coursework:
Computation in Python, Applied Algorithms & Data Structures, Software Engineering, Advanced Data Structures, Operating Systems, Cybersecurity (In Progress)

TECHNICAL SKILLS

Languages: Python, C, C++, Go

Miscellaneous: Git, Containers, Linux, Jira/Agile

EXPERIENCE

Red Hat, Boston, MA **May – September 2019**

Software Engineering Intern

- Collaborated on Podman (an open source Linux container runtime) via Github by fixing bugs and implementing new containerization features with Go
- Ported Podman for MacOS through a SSH Varlink bridge to a Linux VM on MacOS's native Hypervisor
- Packaged Podman using Homebrew to allow for easy installation and seamless native-like user experience
- Applied Agile & Scrum methodologies with full-time team members to facilitate development process

Constant Contact, Waltham, MA **June – August 2018**

Security Research Intern (Software Engineering)

- Created Splunk apps to query email logs and protect against email abuse, alleviating the need to manually search mail logs for bad actors
- Used Python to parse JSON data and pull data from various APIs
- Implemented HTTP server with REST endpoints to handle requests from Splunk and responses from API's
- Deployed HTTP server & Google Safe Browsing database in AWS Lambda & AWS EC2 with Go

PROJECTS

ToyOS **May 2019**

- Booted x86 IA-32 based toy kernel using GRUB to detect available memory given by QEMU
- Added support for multiple arbitrary preemptible threads
- Implemented Unix Filesystem 1 and keyboard driver as Linux modules using C

Coordinate Finder **December 2018**

- Implemented KD-tree to store geographic spatial data in Java
- Used nearest neighbor search and KNN machine learning algorithm to classify coordinate into county
- Analyzed build and run time of balanced vs non-balanced KD tree

SonicSwype, PennApps, University of Pennsylvania, Philadelphia, PA **January 2018**

- Web-based "Tinder for Spotify" application – using Spotify's related artists' function to generate a custom playlist based on user's previous listening history
- Built backend using Django, a Python web framework, and Spotify API