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MATTHEW CROOKS

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EXPERIENCE

Cupertino, CA, USA

Software Engineer, Intern

Capital One

June 2020 - August 2020

- Member of the SITE team, working on new security features for the homepage, www.capitalone.com.
- Built a **dynamic scanning tool**, targeting OWASP top 10 security issues within the CICD pipeline.
- Wrote terraform scripts to easily create and rehydrate AWS instances for our dynamic scanner.
- Created bash scripts to install the dynamic scanner automatically, helping to cut time to rehydrate by 83%.

Design Intern

UC San Diego, Center for Digital Learning

September 2019 – June 2020

- **Published as a contributor** for the online Java Computer Science Textbook, CSAwesome currently utilized by over 100 public school teachers for the upcoming school year's AP CS A exam.
- Developed essential practice content, including questions and answers for the textbook.
- Textbook available at: https://runestone.academy/runestone/books/published/csawesome/index.html

Software Engineer, Intern

Reflexion Health

June 2019 – September 2019

- Built, tested and deployed a scalar, modular internal software tool that alerts developers to build errors.
- Using automation techniques, the tool is able to bolster full-time developers **error detection** by 50%.
- Tested functional compliance, utilizing NUnit & Jenkins techniques to identify weak areas in the code base.
- Utilized agile development to enhance supportability and identify performance bottlenecks.

Software Engineer, Intern

The NetBSD Foundation

June 2018 - September 2018

- Discovered and fixed a buffer overflow exploit (BOE) that allowed for unauthorized memory access.
- Developed fixes and enhancements for inclusion in future code releases and patches downloaded by millions of users.
- Potential threat surrounded the widespread use of the sprintf() method throughout the codebase.

EDUCATION

La Jolla, CA

University of California, San Diego

September 2016 – March 2021

- B.S. in Computer Science, Expected Graduation: March 2021. GPA: 3.83
- Relevant Coursework: Design and Analysis of Algorithms; Computer Architecture; Advanced Data Structures; Software Engineering; Data Science; Theory of Computation.

PROJECTS

- WalkWithMe (2020). Android app that draw from Google Fit APIs to provide precise walking measurements, as well as creating a social aspect that allows users to communicate and schedule walks together. Android Studio, Java, Google Fit, Google Firebase Cloud Firestone.
- Win Percentage Calculator (2019). Web-scraping application. Python; BeautifulSoup; Pandas.

ADDITIONAL EXPERIENCE AND AWARDS

- UCSD CSE, Ethics and Society (2019): Awarded 2rd prize for my 2019 internship project, out of 50 projects.
- Microsoft Student Partner (2019-2021): Selected by Microsoft to a student ambassador on campus.
- IBM Design Thinking Certification (2019) Honored by IBM for exemplary design work on campus.

Languages and Technologies

- Java; C# .NET; C++; C; Python, Pandas; HTML/CSS; Verilog.
- Visual Studio; Android Studio; Google Fit API; Google Firebase; MVC Design Pattern; Agile Development;
 Git.