

ROBERT MORRISON

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EDUCATION

University of Maryland, College Park

B.S. in Computer Science & Statistics

May 2020

GPA 3.6

Recognition: Brian G. Lyons Computer Science Endowed Scholarship (2019), RSA Conference Security Scholars (2019), Maryland Summer Scholars Grant (2018)

Relevant Coursework:

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|----------------------|------------------------|--------------------|---------------------------|
| - Machine Learning | - Software Engineering | - Algorithm Design | - Database Design |
| - Probability Theory | - Data Science | - Comp. Methods | - Artificial Intelligence |

EXPERIENCE

Lockheed Martin

Software Engineering Intern

Jun 2019 - Aug 2019

Rochester, NY

- Re-designed, built and tested a flight data analysis tool in Python used by data scientists and engineers every day
- Overhauled the documentation and fielded maintenance and feature requests for the tool
- Built an internal package management system to boost daily productivity for data scientists, engineers and developers
- Integrated the package management system directly with continuous integration and deployment software
- Constructed a proof of concept Kafka cluster visualization tool as a side project

National Institute of Standards and Technology

Software Engineer

Jun 2018 - Aug 2018

Gaithersburg, MD

- Developed a web scraping tool to harvest solar panel output and power grid usage from utility websites
- Overhauled a legacy flame speed analysis program written in C++ to update it to modern code standards and make it more maintainable in the future while increasing the speed of calculations
- Worked with researchers directly to develop tests for the programs and make sure the new methods were not negatively affecting the accuracy of the results
- Documented the resulting code thoroughly to ensure the maintainability of the program

University of Maryland

Undergraduate Researcher

May 2017 - Present

College Park, MD

- Received the competitive Maryland Summer Scholars grant which is given to less than 30 undergraduates each summer
- Researched and implemented new data oriented vulnerability detection processes for use in the context of software development using Sci-Kit Learn
- Wrote a full technical report describing experimental design and results along with a poster presenting those findings

FedCentric Technologies

Data Science Intern

Jan 2017 - Aug 2017

College Park, MD

- Rapidly learned data science and machine learning techniques over the course of a semester
- Replicated and extended past research on machine learning vulnerability detection on old data-sets using a variety of Python machine learning libraries and R data management tools
- Analyzed additional data using annotation schemes by applying improved machine learning methods that yielded more consistent results than our previous attempt at analysis
- Improved predictive capabilities suggesting possible industry applications that would reduce the cost of vulnerability detection by finding problems before release

Notable Projects

- NetZero – An extensible tool to collect, manage, and analyze several data sources; meant to be used when analyzing the efficiency of a house
- Kakuro Solver – A Haskell Kakuro solver built from scratch which can solve a large Kakuro board in under a second
- Trigger Happy – A computer vision enabled smart nerf gun that prevents what would be lethal shots; won first place at HackPSU

TECHNICAL SKILLS

Programming Languages

Python, C++, C, Java, JavaScript, Haskell, Rust, OCaml, SQL

Tools

Numpy, Pandas, Sci-Kit Learn, OpenCV, Git, Linux, CI/CD

Other

AutoCAD, L^AT_EX, MatLab, Unit Testing, Agile Methodologies