ROBERT MORRISON

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EDUCATION

University of Maryland, College Park May 2020
B.S. in Computer Science & Statistics *GPA 3.6*

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

Relevant Coursework:

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

EXPERIENCE

Lockheed Martin Jun 2019 - Aug 2019
Software Engineering Intern *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 using Docker and Node JS

National Institute of Standards and Technology Jun 2018 - Aug 2018
Software Engineer *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 May 2017 - Present
Undergraduate Researcher *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 Jan 2017 - Aug 2017
Data Science Intern *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 Python command line tool used 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, written with JavaScript and Arduino, that prevents what would be lethal shots; won first place at Hack Penn State

TECHNICAL SKILLS

Programming Languages	Python, C++, C, Java, JavaScript, Haskell, Rust, Go, OCaml, SQL
Tools	Numpy, Pandas, Sci-Kit Learn, Docker, Git, Linux, CI/CD
Other	AutoCAD, LaTeX, MatLab, Unit Testing, Agile Methodologies