Joshua Messitte

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Education

University of Georgia, Honors College *BS*: *12/21 MS: *12/22 **GPA: 3.9**
B.S. Computer Science , M.S. Computer Science , Minor: Public Health

Technical Skills

Language: (Proficient) Java, Python, C++, MIPS Assembly (Intermediate) x86Assembly, C (Beginner) JavaScript, PHP, Ruby
Frameworks / Technologies: R, MATLAB, SQL, HTML, CSS, Django, Flask, IDA, Ghidra, ProcMon, RegShot, STK (Systems ToolKit), Wireshark
Software: Git, Maven, Heroku
Licenses: HAM Radio Technician (KO4PLI)

Experience

Booz Allen Hamilton – *Cyber Intern, National Security Group*
Malware/Reverse Engineering Team June 2021 - Present

- Focused on identifying and analyzing encrypted information in network communication for threat hunting and analysis.
- Designed and built a network traffic analytics platform with interactive data and a predictive machine learning model. The tools were part of our suite to identify malicious activity in encrypted information.
- Utilized Random Forest Algorithms to detect malware in encrypted network traffic.

Malware/Reverse Engineering Team June 2020-August 2020

- Focusing on malware analysis and reducing barrier of entry for new malware analysts.
- Developed two command-line tools for malware triaging, tagging, and analysis. The tools were presented to Cyber Account leadership.
- Downstream analysis enabled via indexing output with Elasticsearch.

Small Satellite Research Laboratory – *Mission Operations Team*
Team Lead January 2021- Present

- Direct and oversee the development and maintenance of UGA's COSMO Ground Station as well as command-and-control testing of system software to demonstrate readiness.
- Direct laboratory recruitment by coordinating applications, interviewing laboratory applicants, and onboarding new members.

Team Member October 2020 – February 2021

- Focused on system command-and-control via Python API and other software techniques.
- Developed Concept of Operations and other documentation for MOCI (Multiview Onboard Computational Imager) Satellite

UGA Division of Academic Enhancement – *Computer Science Tutor* May 2020 – January 2021

- Peer tutor to other undergraduate students for the following courses.
- Relevant Courses: Software Development, Systems Programming, Data Structures, Intro to Python, Discrete Mathematics

UGA Visitor Center – *Tour Leader* November 2018 – Present

- Give year-round tours to prospective students and their families and serve as an all-around student ambassador a university representative.
- Staff the visitor center desk, answer phone calls, and help guests; hired as a freshman.

Research & Projects

EyeSpy Malware Analysis Tool Suite Summer 2021

- Network Traffic analyzer built using the Flask Webserver which triages encrypted network comms, predicts malware using ML, and identifies encryption in binary sample.

Center For Orbital Satellite Mission Operations (COSMO) October 2020-Present

- The COSMO station's main goal is to facilitate system command-and-control using hardware and software techniques to track satellites in orbit, downlink/analyze data, and be rapidly re-used for other mission. The ground station uses technologies including the Yamcs server, MATLAB, GnuRadio, and GPredict.

Bookaholics Spring 2021

- Website designed using the Django framework complete with user authentication, encryption of sensitive data, and full administrative capabilities. Developed using Scrum and Agile methods.

Distributed Computing Systems Spring 2021

- Java systems for parallel computation include a threaded FTP client/server system, and a consistent-hashing-based nameserver.

Computer Networking Suite Spring 2020

- Python tools focused on network analysis and latency diagnostics. Developed a secure TCP Traceroute and a DoH capable DNS Server.

Malware Analysis Framework – A Toolkit of Static Malware Analysis Summer 2020

- A modular framework with various features including twitter scraping, file tagging, and Yara database scaling.
- Tools integrated into firm's adaptive malware analysis system.