Aidan Melvin

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EDUCATION

University of Maryland, College Park *Expected Graduation: May 2024, GPA: 4.0*

- B.S., Computer Science (Machine Learning)
- *Banneker-Key Scholar* (full-ride merit scholarship, granted to <0.5% of admitted students).
- *Advanced Cybersecurity Experience for Students* (ACES) Honors Living-Learning Program.

Coursework: Computer Systems, Algorithms, Compilers, Applied Cybersecurity, Object Oriented Programing II

TECHNICAL SKILLS

Languages: Python, Java, TypeScript, MERN stack, Ruby, OCaml, HTML/CSS, R, Bash, C/C++, SQL
Tools/Frameworks: Linux, Git, TeamCity, Agile Method, Maven, JUnit, Jest, TensorFlow, Octave, Github, SDLC

WORK EXPERIENCE

Software Engineering Intern, PayPal *May 2022 - August 2022*

- Used JetBrains' TeamCity to create CI/CD flows for team members' PayPal Credit SOR code.
- Contributed to full-fledged unit and integration test suites using JUnit and Confluence documentation.
- Utilized IntelliJ's debugger, pgAdmin, Postman, and Git to assist in development and functionality verification.

Software Engineering Intern, Capital One *February 2022 - April 2022*

- Bolstered an in-house federated learning project by creating and testing Django database schemas.
- Created React unit testing suite for the entire project, achieved at least 80% coverage for all components.
- Presented my work on the project to 8 high-level Capital One senior directors.

Software Engineering Intern, Praxis Engineering *May 2021 - August 2021*

- Designed a script that enables military personnel to troubleshoot of AWS Linux networks and sensors aggregating geolocation, status, and audio data, as well as parse and analyze network statistics.
- The script parsed more than 100KB/s of XML data into an easy-to-read terminal dashboard output as well as more detailed CSV output for later analysis.
- Participated in and contributed to daily 7-member team scrum meetings.

ACTIVITIES AND LEADERSHIP

App Dev Club Founder & President *June 2022 - Present*

- Teach 160 students mobile app development technologies including React Native, Flutter, and backend
- Strengthened verbal and written communication skills by working to acquire club sponsorships and funding.

PROJECTS

U.S. Cybersecurity Attack Surface Research *January 2023 - Present*

- Working to determine relationship between socio-economic factors of a county and its cyber vulnerability.
- Using U.S. Census data API, data from Shodan and Censys, and Python regression/ML tools to carry out research.

Northrop Grumman Innovation Week Hackathon March 2023

- Won top 3 out of 12+ teams for developing a search engine to facilitate searching and vetting of startups.
- Used Flask, BeautifulSoup, TF-IDF, and MongoDB to allow searches of over 20,000 companies in under 3 seconds.

Honeypot Cybersecurity Research Project *September 2022 – December 2022*

- Worked on a 5-month team project developing a honeypot system to study online attacker behaviors.
- Used LCX, iptables, firewalls, networking, MITM, Key Loggers and Python/shell scripts to develop infrastructure.
- Aggregating data on attacker behavior and analyzing it to determine common cybersecurity threat actor behaviors.

Cellular Disease Tracker *September 2021 - December 2021*

- Worked with three other students to develop a TensorFlow convolutional neural network to accurately identify malaria-infected cells correctly 93 percent of the time using Google Collab.