ADDO DAVIES JR.

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~ 2 Years of Professional Research & Software Development Experience

Seeking full-time opportunities in Software Development & Research to use my extensive knowledge of software engineering, innovative critical thinking skills, & passion for technology to develop & implement high-quality software solutions that benefit society.

EDUCATION

Rochester Institute of Technology (RIT), Rochester, NY — 2024
Bachelor of Science, Software Engineering — **3.14 GPA**

CERTIFICATIONS

AWS Certification *(Pending)* — 2024
Dale Carnegie Leadership Training — 2023

SKILLS

Programming Languages: Python, Java, C++, SQL, JavaScript, CSS, HTML, Node.js
Technical Skills: AWS, CloudFormation, Terraform, Ansible, Docker, OpenSCAP, Bash, Git, React
Key Concepts: Cybersecurity, Object-Oriented Programming, DevSecOps, Database Development, Vulnerability Assessment & Analysis, Infrastructure as Code (IaC), Agile Methodologies (SCRUM)
Project Oriented Skills: Self-Motivated, Articulate Planner, Team-Player, Critical Thinker, Problem Solver

PROFESSIONAL EXPERIENCE

RIT Collegiate Science & Technology Entry Program (CSTEP), Rochester, NY — 2024 – Present
Cloud Application Security Research
- Research ways to create a secure software environment in the cloud for testing proof of concepts, ensuring data integrity & confidentiality while mitigating potential vulnerabilities.
- Conceptualize software requirements needed for 3 distinct solutions.
- Craft a comprehensive technical research document detailing progress & presenting potential architectures for addressing the identified problem.

RIT Laboratory of Software Design & Productivity, Rochester NY — 2023
Software Security Research & Development Engineer Intern
- Enhanced vulnerability management processes with actionable insights from analyzing 800+ CVEs.
- Deployed an application to retrieve CVEs from CNA catalogs, gathering 2,800+ unique CVEs between 2016-2023.
- Deployed an application to extract CWEs from CVEs, getting 1,000+ unique CWEs between 2020-2023.
- Analyzed collected data & showed patterns for analyzing CVE automatability, characterizing 800+ CVEs.

TEOCO, Henrietta, NY — 2022 – 2023
Software Engineer Intern
- Spearheaded end-to-end product feature development using Python, Selenium, OCR, and Pandas, boosting efficiency by 30%.
- Engineered a password-changing application with Selenium, cutting manual workload by 80%.
- Curated a report analysis application, sending email notifications with detailed statistics, enhancing error resolution & user awareness.

Penn State University Applied Research Laboratory, State College, PA   2022
Software Engineer Research & Development Intern
- Deployed a scalable, fully automated security pipeline for AI software using Docker, Podman, OpenSCAP scanner, & Ansible-Runner.
- Orchestrated the development of a streamlined process for pulling, scanning, and reconfiguring Docker images based on OpenSCAP Policy using Ansible, resulting in a 40% reduction in deployment time.
- Enhanced OpenSCAP policy compliance of JupyterLab Image by 23% through pipeline integration.
- Enhanced OpenSCAP policy compliance of RedHat Image by 24% through pipeline integration.

PROJECTS

Maintenance Request Workflow Application – Senior Capstone Project   2023 – Present
Cloud Computing, Microservices, AWS Technologies, Python
- Collaborated with a team of 5 on the development of a responsive web application for Lockheed Martin, streamlining IT license maintenance workflows, serving as Back End Lead
- Crafted a comprehensive AWS CloudFormation template to implement automatability and infrastructure as code (IaC) to the back-end stack.
- Crafted unit & manual test cases to validate database & Lambda quality & logic in the existing architecture, achieving a code coverage of 95%.
- Utilized AWS Relational Database Service (RDS) to deploy a database to hold workflow data.
- Utilized AWS Lambda & API Gateway to deploy CRUD Operations for key database resources.

OtterView – Academic Project   2023
Cloud Computing, Microservices, AWS Technologies, Python
- Collaborated with a team of 4 to develop a user-friendly web application for finding the sentiment analysis of a specified event.
- Implemented backend with AWS Lambda processing Twitter comments via AWS Comprehend, storing data in DynamoDB.
- Created CloudFormation template for deploying application resources.
- Configured Python UI application runner for automatic CloudFormation deployment & user interaction, cutting application startup time by 75%.

Input Handling – Academic Project   2023
Input Sanitization, Jest Test, JavaScript
- Crafted an input handling system for book title validation.
- Implemented processes using Block List, Allow List, & internationalization for book title validation & regex capture groups for input cleaning.
- Passed 100% (73 out of 73) of tests used to check the overall quality logic of the application.

Fuzzer – Academic Project   2023
Software Weakness (Vulnerability) Identification, Python
- Crafted a command-line application for web scraping to detect website vulnerabilities, streamlining detection & analysis.
- Implemented a process to retrieve and show all inputs of a specified website to send vectors into for vulnerability testing, optimizing assessment accuracy.
- Discovered over 300 Vulnerabilities and 550 Unsanitized Inputs from RIT provided website.

EXTRACURRICULAR ACTIVITIES

RIT Chapter of the National Society of Black Engineers (NSBE)   2021 – Present
President

Men of Color, Honor and Ambition (M.O.C.H.A)   2023 – Present
Cohort 10