Charles Archer

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Experience

Deputy Product Owner, Lockheed Martin – Marietta, GA Oct 2024 – Present

- Led a team of 10 engineers in developing a command and control (C2) system to improve air refueling operations
- Reduced review cycles by 50% and improved quality through comprehensive code reviews and key feature integration
- Increased team alignment and communication by serving as the primary point of contact for project stakeholders
- Enabled timely project completion by improving team performance through technical support and mentorship

Senior Software Engineer, Lockheed Martin – Marietta, GA May 2024 – Present

- Improved pilot usability and mission readiness by developing 23 features for an air refueling system display using Lua and C++, contributing to 82% of total functionality and enabling real-time control and status monitoring
- Streamlined documentation by 67.7% and improved overall readability by developing an automated system in Python
- Increased system alignment with organizational conventions by 84% for a pilot-facing platform by integrating upstream updates, conducting comprehensive system tests, and resolving critical runtime errors and unit test failures
- Optimized pilot navigation and efficiency by developing innovative buttons for an air vehicle ground station, enabling the operator to quickly navigate between displays, issue reset commands, and access critical status information

Software Engineer, Lockheed Martin – Marietta, GA Jan 2021 – May 2024

- Increased operational awareness and efficiency by 50% through the development of a streamlined Lua-based display for the electrical system of an autonomous air vehicle, providing intuitive controls and critical performance data
- Improved the accuracy of pilot training devices by designing and developing interfaces, plugins, and models in C++ to enable real-time communication of simulated environmental data over a High-Level Architecture (HLA) network
- Optimized the validation of 23,000+ test cases by automating the generation of XML unit test reports and seamlessly integrating them into GitLab pipelines, enabling efficient processing and improved visibility of test results
- Reduced the infrared radiation (IR) signature generation process time by 40% through the development of a Python-based data manipulation utility, significantly decreasing required manual labor and optimizing workflows
- Decreased test runtime by 90% and increased developer efficiency through enabling independent unit test execution
- Achieved 100% unit test coverage by developing harnesses to ensure comprehensive testing and software reliability

Projects

Cryptocurrency Trading Bot

- Developed a cryptocurrency trading bot that records comprehensive transaction details in a MongoDB database, integrated with a responsive React web interface for real-time visualization of profit analytics and transaction data

Non-Fungible Token Projects

- Created web applications using React and Vue.js to support Solana blockchain utilities for several Non-Fungible Token (NFT) projects, ensuring seamless deployment on Amazon Web Services (AWS) for optimal performance and reliability

Skills

Languages/Frameworks: Bash, C, C++, CSS, HTML, Java, JavaScript, Lua, Python, React, Vue.js, XML
Development Tools: Bitbucket, Confluence, Git, Gitlab, GitHub, Jira
Cloud Technologies: AWS, Vercel
Operating Systems: Linux, macOS, Windows
IDEs: Eclipse, Visual Studio Code
Design: IBM Rhapsody, UML Diagrams, Visio

Education

The University of Alabama Dec 2020
Bachelors of Science in Computer Engineering GPA: 3.9
Minor in Computer Science and Mathematics