

Charles Archer

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charlesarcher.me

Experience

Software Engineer – Lockheed Martin

Marietta, GA

Advanced Development Programs

July 2023 - Present

- Develop mission-critical displays for ground station operations, leveraging Lua to dynamically convey and update status information, enhancing real-time monitoring and decision-making capability
- Elevate unit test coverage to 100% by innovatively creating stand-alone test harnesses, ensuring comprehensive testing and reinforcing software reliability within an agile development environment
- Automate the generation of XML unit test reports, seamlessly integrating them into GitLab pipelines for efficient processing and validation within the software development workflow
- Apply expertise in C++ and Lua to deliver ongoing maintenance and support, addressing software issues and optimizing the reliability, functionality and overall performance of critical systems

Simulation and Systems Test

Jan 2021 - July 2023

- Led a strategic effort to significantly enhance the accuracy of pilot training devices for fifth-generation aircraft by skillfully creating an interface to a real-time, high-fidelity simulation environment
- Designed and developed C++ interfaces, plugins, and models, showcasing expertise in crafting solutions to effectively communicate environmental data over a high-level architecture network
- Facilitated seamless integration of 20 subsystems through comprehensive testing procedures, achieving a 100% release success rate and ensuring the successful delivery of multiple aircraft
- Streamlined the process of generating infrared radiation signatures by 40% through the creation of an advanced suite of data manipulation utilities, significantly cutting down on required labor
- Improved the functionality of a real-time simulation system through maintenance and support, leading to a 33.33% backlog reduction and substantial performance enhancements

Projects

Cryptocurrency Trading Bot

Nov 2023 - Present

- Developed a cryptocurrency trading bot that records transaction details in a MongoDB database, accompanied by a React web interface for real-time display of profit analytics and transaction data

Non-Fungible Token Projects

Feb 2022 - Sept 2022

- Engineered web applications using React and Vue.js to support Solana blockchain utilities for various Non-Fungible Token projects, while also overseeing their deployment on Amazon Web Services

Skills

Languages/Frameworks: Bash, C, C++, CSS, HTML, Java, JavaScript, Lua, Python, React, Vue.js

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

Education

The University of Alabama

Dec 2020

Bachelors of Science in Computer Engineering

GPA: 3.9

Minor in Computer Science and Mathematics