Brandan Tyler Lasley

(503) 929-3771 | brandan@brandanlasley.com | LinkedIn | GitHub | Phoenix, Arizona

Professional Summary

Safety-critical software engineer with 3+ years developing avionics systems for commercial aircraft. Specialized in performance optimization, systems programming, and DO-178C compliant development. Proven track record of building scalable applications serving thousands of users and modernizing legacy systems.

Work Experience

Honeywell Aerospace Phoenix, Arizona
Software Engineer - Flight Systems *Jan 2023 – Present*

- Design, develop, and maintain avionics user interface pages for the Flight Management System (FMS) on the Multi-Function Control and Display Unit (MCDU) and Multi-Function Display (MFD) for **Airbus** commercial aircraft using **ADA**, **C++**, and **C** in a safety-critical, **DO-178C**-compliant environment
- Perform verification, integration, and validation (IV&V) of flight deck interfaces to ensure compliance with Airbus requirements and human factors standards, contributing to **zero safety incidents** in deployed systems
- Collaborate with cross-functional teams (systems, safety, and test engineers) to refine requirements, conduct design reviews, and support certification activities for **multiple aircraft programs**
- Develop and maintain custom aerospace tools including IDE plugins, compilers, and static analysis tools using **React** and **C#**
- Lead development and maintenance of internal web-based tooling for **50+ engineers**, enhancing team productivity and traceability across software versions
- Oversee and manage **physical FMS test benches** and lab environments used for regression, integration, and system-level testing
- Support debugging, defect analysis, and root-cause investigation for in-service issues

Marion Area Multi Agency Emergency Telecommunication Center [METCOM] Woodburn, Oregon
Freelance Software Engineer *June 2015 – June 2016*

- Developed interactive web applications using **Leaflet JS**, **AngularJS**, **PHP** and **MySQL** used to help with the organization and communication of emergency responders in big emergencies such as wild fires

Key Achievements

Safety-Critical Systems: Contributed to DO-178C Level A software development for commercial aviation with zero defects

Performance Optimization: Increased game engine object limits from 2,000 to 65,535 through memory management improvements

Community Impact: Built Oregon 9-1-1 platform serving thousands of users during emergencies, gaining 10K+ Twitter followers

Systems Programming: Specialized in assembly-level optimization and reverse engineering for performance improvements

Projects

Populous: The Beginning Game Engine Modernization | *Monthly Builds* | *Website*

- Led modernization of 1998 Electronic Arts game engine, porting to modern systems and extending multiplayer capacity from **4 to 8 players**
- Rewrote scripting engine using **SOL3 LUA**, enabling community modifications and reducing development time
- Engineered performance improvements: rewrote input subsystem (**RawInput**), audio (**SFML**), and memory management, increasing object limits by **3,100%** (2K to 65K objects)
- Technologies: **C++14**, **DirectX6-9**, **x86 Assembly**, **Jenkins CI/CD**, reverse engineering

Oregon 9-1-1 | *GitHub (Front End)* | *GitHub (Back End)* | *Washington County Feed* | *Clackamas County Feed*

- Developed and maintained interactive map service that visualized real-time emergency calls in the Portland metro area from 2009 to 2017, serving thousands of users during peak times
- Built front-end using **PHP**, **JavaScript**, and **MySQL**, with backend services written in **Perl**, **C++**, and **Visual Basic.NET**

- Created Twitter feeds that amassed a total of 10k followers across multiple accounts for different emergency services
- Developed interactive website/map displaying all calls, unit statuses (en-route, on-scene, etc), previous call history, and user subscribable alerts

CSE412 Traffic Accident Visualization | *Demo* | *GitHub*

- Built interactive map using **Leaflet JS**, **PHP**, **AngularJS**, and **PostgreSQL**
- Visualized traffic accidents within the Washington and Clackamas counties in Oregon
- Implemented ability to filter incidents by date and area in real time using interactive tools

Education

Arizona State University Tempe, Arizona
Ira A. Fulton Schools of Engineering
Bachelors of Science in Computer Science *Jan 2018 – May 2022*

Skills

Safety-Critical Development: DO-178C, ADA, Airbus Requirements, IV&V, Hardware-in-the-Loop Testing
Systems Programming: C, C++, Intel Assembly (x86-64), Performance Optimization, Memory Management
Modern Development: C#, React, Python, Java, Git, Visual Studio, Linux
Web Technologies: PHP, JavaScript, MySQL, PostgreSQL, AngularJS, LeafletJS, React
Specialized Tools: Valgrind, Intel Parallel Studio, Jenkins, DirectX, OpenSSL, Boost, Poco