

Jeff Brandon

Software Engineer

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Los Angeles

Objective

Self starter seeking high impact role in a fast paced environment. I thrive taking ownership of a product or feature, aligning on goals across stakeholders, and executing against them iteratively until the feature can be delivered with well defined success metrics.

Skills

Programming Languages and Tools: Kotlin, Java, C, C++, C#, react, Hack, javascript, go, perl, python, Android, adb, x86, x86_64, ARM, linux, Dagger2, CentOS, gdb, WireShark, SVN, Git, Jira, .Net, IDA, memory and performance profiling, alerting, data analysis, data visualization

Experience

Meta - Reality Labs, September 2020 - October 2024
2023-2024

Quest Remote Desktop Reliability - Ran deep investigations on C++ audio/video streaming libraries to identify and remedy quality issues within the stack. Worked with cross functional partners to define key metrics and instrument them for monitoring and reporting. Adapted a mobile experimentation module to the desktop companion app to enable high fidelity experimentation and rapid configuration changes for the app.

Aligned team release strategy updating our ship cadence from once per month to once per week. This was achieved by defining and implementing guardrails with automated signal reporting. This enabled shipping with high confidence or rapid reactions to regressions. Worked closely with Data Science and Data Engineer counterparts to understand signaling requirements and implement them. Utilized SQL to analyze telemetry and isolate issues to affected versions of the app.

Authored and presented technical documents to communicate complex solutions to problems facing the team. Topics include Failed Connection automated retry logic, Performance Logging module Architecture (how to measure flows that span multiple processes applications and devices)

2022-2023

Built iOS app entry point for VR meetings. Created a telemetry container to manage the begin and end of user journey measurements. Enabled the team to measure impact on key metrics. Modernized code by converting objective-c code to swift.

2020-2022

Developed mobile applications for Portal entertainment experiences including music and video streaming services. Shipped new features in self-contained packages using experimentation to ensure no regressions. Deprecated major monolithic system service by creating smaller services that can run as ad-hoc one shot operations, freeing up system resources to be utilized by other applications..

Robert Bosch LLC. - Security and Safety Things Applications Team, September 2018 - August 2020
Developer

Spearheaded tech transfer from neural network/ai contracting team. Updated and hardened an Android application for detecting and analyzing faces. Worked in an agile environment with daily scrum. Diagnosed and addressed various bugs and application crashes. Created applications for an IOT AOSP based system that makes use of a specialized hardware for rapid object detection in streaming images.

MIT Lincoln Laboratory - Secure Resilient Systems and Technology, August 2016 - August 2018
Associate Technical Staff

Tested and prepared software for an enterprise class satellite in final weeks before launch. Integrated with an established team and contributed to the logging infrastructure and telemetry downlink parsing. Used remote debugging in gdb to debug on the powerpc architecture.

Developed a secure processing platform for small (cube) satellites that utilized Xilinx FPGAs, seL4 microkernel, and NASA Core Flight Software. By providing strongly separated and permissioned spaces we reduced risk to small space assets. Designed a remotely activated root of recovery system to reset a satellite to a known capable state in event of a system failure.

Participated in a Micro UAV (quadcopter) autonomous race. Applied machine learning (tensorflow) to a computer vision problem to recognize goals in the course. Planned an optimal path and navigated the course in three timed trials.

NASA Jet Propulsion Laboratory - 393G, June 2015 - August 2015
Intern

Worked with the Cyber Security team on a contract with an external client in the oil and gas industry to secure their network infrastructure, specifically surrounding their SCADA systems. I performed threat analysis, and identified potential points of entry into the secured network. I also documented potential methods an adversary could use to spread their control through the system.

Lockheed Martin June 2014 - August 2014

Corporate Engineering and Technology Operations - Net Centric Integration and Development
Technical Intern

Wrote requirements for, designed, implemented, and tested a social user-group feature for an internal modeling and simulation repository called ModSTAR. I applied my knowledge of software engineering and web based development. Primarily used ASP.NET, C#, javascript, and jQuery to implement the social suite with SQL to interface with the backend database.

Education

Carnegie Mellon University – INI, M.S. Information Security, GPA: 3.8, May 2016

Awarded "CyberCorps: Scholarship for Service"

Spring 2016: Graduate Artificial Intelligence, Neuroscience for Engineers, Ethics and Policy Issues in Computing

Fall 2015: Mobile Security, Cyber Intelligence, Special Topics: Cyber Security Research

Spring 2015: Information Security Risk Analysis, Information Security Policy and Management, Introduction to Software Reverse Engineering, Secure Software Systems, Distributed Systems

Fall 2014: Introduction to Information Security, Fundamentals of Embedded Systems, Fundamentals of Telecommunication Networks, Applied Information Assurance

Summer 2014: Computer Systems A Programmer's Perspective 15-213

Central Michigan University – B.S. Computer Science and Mathematics, GPA: 3.6, May 2014
Core Courses: Intro to Operating Systems, Software Engineering, Mobile Development, Advanced Data Structures, Advanced Algorithms.