Jeff Brandon

Software Engineer

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Los Angeles

Objective

Software Engineer seeking a high-impact role in a fast-paced environment. After close collaboration with data scientists and engineers I strive to ensure the applications and services I support have robust signaling that is straightforward to consume. I take pride in improving systems I work on.

Skills

Programming Languages and Tools: Kotlin, Java, Android, C, C++, C#, React, Hack, Javascript, Go, Perl, Python, adb, talkback, x86, ARM, Linux, Dagger2, MVVM architecture, gdb, WireShark, SVN, Git, Mercurial, 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

- Supported the Remote Desktop app for Meta Quest devices, allowing the millions of headset owners to connect to their PC or Mac devices in virtual or mixed reality.
- Team Data and Experimentation Expert. Structured logging data for processing to ensure user privacy and data separation. Defined application reliability signals and ensured data could be sliced and analyzed in many dimensions e.g.) device model, app/os versions, and account type. Adapted a mobile experimentation module for the desktop companion app, ensuring high-fidelity experimentation across multiple identity types.
- Surfaced available data to build visualizations for app roll out, reliability metrics, and app build times to increase team situational awareness in any moment.
- Refactored code to implement dependency injection and migrated the data model to Kotlin Flows and coroutines, improving project maturity and usability.
- Supported app migration to a platform service for remote desktop access to minimize code duplication.
- Conducted deep investigations on C++ audio/video streaming libraries to resolve quality issues.
- Developed the telemetry schema for a high-priority effort within a two-week turnaround, enabling timely project delivery for Meta Connect 2024.
- Led efforts to instrument the application, focusing on host service and mobile client.
- Led a team of four during a reliability lockdown, driving the telemetry and experimentation workstream. Increased release cadence from monthly to weekly by defining guardrails and implementing automated signal reporting. Collaborated with Data Science and Data Engineering cross functional partners to align on signaling requirements and analyzed telemetry data using SQL.
- Regularly addressed technical audiences of 100 or more on topics including: Experimentation, Telemetry and performance logging, and Advanced Connection Retry Logic.

2022-2023

Workplace Video Conferencing Mobile App iOS

- Learned iOS development best practices
- Learned about Meta Telemetry infrastructure
- Built the iOS app entry point for VR meetings, creating a telemetry container to manage user journey measurements and enabling the team to assess impact on key metrics.

- Modernized code by converting Objective-C to Swift.

2020-2022
Portal Entertainment
- Developed mobile applications for Portal entertainment experiences from Meta and 3rd parties. Apps supported include: Spotify, Pandora, iHeartRadio, and Facebook Watch.
- Collaborated closely with the Design team to implement UI for Spotify app rewrite, ensuring responsive experience that looked great on different screen sizes.
- Applied MVVM architecture to Spotify app rewrite so business logic could be re-used and extended by future apps.
- Designed and guided an intern project to support podcasts within Spotify.
- Utilized Kotlin Flows and coroutines to parallelize data fetching and background app execution.
- Released new features through experimentation to prevent regressions. Deprecated a major monolithic system service by creating smaller, more efficient services.
- Worked closely with external iHeartRadio developers to assist them in publishing a new version of their app that would not require additional Meta support.

Robert Bosch LLC. - Security and Safety Things Applications Team, September 2018 - August 2020
Software Engineer
- Spearheaded tech transfer from an AI contracting team, updating and hardening an Android application for face detection and analysis. Worked in an Agile environment, diagnosing bugs and application crashes. Developed applications for an IoT AOSP-based system leveraging specialized hardware for rapid object detection.

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 the final weeks before launch, contributing to logging infrastructure and telemetry downlink parsing. Utilized remote debugging with GDB on PowerPC architecture.
- Developed a secure processing platform for small satellites using Xilinx FPGAs and the seL4 microkernel, reducing risk to space assets. Designed a remotely activated recovery system to reset satellites in case of failure.
- Participated in a Micro UAV autonomous race, applying machine learning to solve a computer vision problem for goal recognition.

NASA Jet Propulsion Laboratory - 393G, June 2015 - August 2015
Intern
- Collaborated with the Cyber Security team to secure network infrastructure for an external client in the oil and gas industry. Conducted threat analysis and documented potential vulnerabilities in SCADA systems.

Lockheed Martin June 2014 - August 2014
Corporate Engineering and Technology Operations - Net Centric Integration and Development
Intern
- Wrote requirements, designed, implemented, and tested a social user-group feature for an internal modeling and simulation repository using ASP.NET, C#, JavaScript, and jQuery.

Education

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

- Awarded “CyberCorps: Scholarship for Service”
- Selected Courses
  Graduate Artificial Intelligence, Mobile Security, Cyber Intelligence, Cyber Security Research, Information Security Risk Analysis, Introduction to Software Reverse Engineering, Secure Software Systems, Distributed Systems, Introduction to Information Security, Fundamentals of Embedded Systems, Fundamentals of Telecommunication Networks, Computer Systems A Programmer’s Perspective (15-213)

Central Michigan University – B.S. Computer Science and Mathematics, GPA: 3.6, May 2014

- Selected Courses
  Intro to Operating Systems, Software Engineering, Mobile Development, Advanced Data Structures, Advanced Algorithms.