

Sean Letzer

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Objective

Looking to bring my expertise in embedded systems alongside a fluid mix of soft skills and technical skills to a team that values collaboration and innovation.

Experience

Canoga Perkins, Senior Software Engineer/Team Lead

Chatsworth, CA, USA
Apr 2023 – May 2025

- Modified a linux ethernet driver (xilinx) to work with a custom FPGA image
- Created a custom filesystem on linux using FUSE codenamed sensorFS that created a more detailed sensor interface for the product
- Created a custom distribution in SONIC OS for a Time-Sensitive Network Switch
- Designed and Implemented various features in a python3 testing application code-named Improv (Internal Manufacturing Provisioning) using QT for python
- Debugged various bus issues (I2C, SPI) using a Saleae Logic Analyzer
- Drove the requirements for an embedded webserver on the Time-Sensitive Network Switch, and managed an outsourced team to implement it
- Participated in various design reviews for hardware and software
- Led SCRUM ceremonies (planning, grooming, retrospectives, standups)

Google, Customer and Partner Engineer

Playa Vista, CA, USA
Oct 2022 – Mar 2023

- Understand product area partner/Original Equipment Manufacturer (OEM) use-cases, distilling them into product requirements and implementation.
- Support enablement of third-party labs for automated and manual device certifications.
- Define experiences that realize requirements and build the necessary pieces working with key platforms and partner devices.
- Identify opportunities to improve scaled solutions to more device categories.
- Drive technical execution of strategic partner relationships within Google and launch third-party products.
- Support partners in product feature definition, implementation, pre-test, and production.
- Support partners to develop and customize features.
- Work with product area Engineering sub-teams to get features built and implemented.
- Support SoC partners, bring up, and development.
- Assist System Integrators, Original Design Manufacturers (ODMs), and Distributors in scaling products.

Canoga Perkins, Software Engineer

Chatsworth, CA, USA
Apr 2020 – Sept 2022

- Developed/maintained an application that ran on a Time-Sensitive Network Switch written in C.
- Developed a Linux device driver for a custom FPGA image on the Time-Sensitive Network Switch.
- Created/customized a Linux distribution via Yocto that was the main embedded-OS that ran on the Time-Sensitive Network Switch.
- Created DevOps pipelines for said projects using Gitlab's CI/CD framework written in YAML.

Frostkeep Studios/Indi-Ev, Software EngineerIrvine, CA, USA
Oct 2019 – Apr 2020

- Embedded Android development for an electric vehicle Infotainment System on an NXP IMX8 SoM.
- Developed android navigation app using mapbox android SDK.
- Integrated Alexa-Auto SDK into navigation application.

Panasonic Avionics Inc, MTS 2 Software EngineerLake Forest, CA, USA
Mar 2016 – Oct 2019

- Developed/Maintained a File Delivery application written in C/C++ that was responsible for pushing a large file-set over a Multicast UDP stream to hundreds of seat-back monitors of the InFlight Entertainment System.
- It advertised these files to upper layers via a FUSE FS. Android SELINUX compliant.
- Developed/Maintained a loading application in C++/QT for use by Field Engineers to load initial software set to the plane in a factory-fresh state.
- Created a toolchain for a legacy target.
- Dockerized build environments for said apps and integrated them into Gitlab CI pipeline.
- Created Expect scripts to automate user-input to hundreds of seatback monitors for testing.

Kiersted System LP, Software EngineerIrvine, CA, USA
Nov 2015 – Mar 2016

- Developed dynamic web applications using the Java EE + Spring frameworks.
- Incorporated data visualization techniques into web apps.

Magzor Robotics Inc, Platform Architect Intern

June 2015 – Nov 2015

- Design and development of an Embedded Library that allows Magzor Solutions to integrate smoothly into popular electronics development platforms (Arduino, Texas Instrument's MSP430/432, Intel Edison, etc).
- Designed and developed a Code Generator to give Magzor customers custom programs to use with their online hardware purchases.

Skills

Programming Languages (Proficient): C/C++, Java, Python, Bash**Programming Languages (Familiar):** Expect Script/TCL, Python, QML/QT, YAML**Databases:** MySQL, Sqlite3, Redis**Platforms & OS:** Linux, Android, Docker, Yocto**Debugging & Network Analysis:** GDB, Valgrind, Tcpdump, Wireshark**Web Technologies:** Java EE, Apache Tomcat, Spring, JSP, JDBC, RESTful**Source Control:** Git, SVN, Gitlab**Static Analysis & Code Review:** Codebear Collaborator, Klockwork, Coverity**Security:** SELINUX, TLS, Linux PAM Module**Toolchains:** GCC, Bionic NDK, Crosstool-ng, Buildroot, Yocto

Education

B.S. University Of California, Irvine, Computer Science

June 2016