

Eric Chang

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Education

UC San Diego
BS Computer Engineering
Sep 13 – Mar 17
GPA: 3.42

Skills

Languages

C • C++ • Java • HIDL
Python • JavaScript • SQL

Tools & Technologies

TCP/IP • Linux sockets
eBPF • OpenSSL • SELinux
Google Test • GDB • Git
Wireshark • CMake

Android Platform

Android Studio • ADB • VTS
Soong • Repo • Gerrit

Experience

Qualcomm San Diego, CA
Senior Software Engineer Nov 19 – Current
Software Engineer Jul 17 – Nov 19

- Designed, developed, and commercialized advanced networking, connectivity, and telephony features on embedded Linux and Android.
- Applied modern C++17 practices for new features and components, including object oriented programming, design patterns, and functional programming.
- Developed multi-threaded, event-driven software with inter-process communication (IPC) in C++ and Java, and designed new Hardware Abstraction Layer (HAL) interfaces.
- Experienced with debugging connectivity issues across multiple layers of the Android network stack - ConnectivityManager SDK, HAL, Linux kernel, and native vendor daemons.
- Contributed to a large scale re-architecture of the Radio Interface Layer (RIL) by applying modern design principles to break down highly complex functionality such as mobile data establishment, WiFi/video/emergency calling, and multi-SIM support.
- Led a small team to improve developer unit test coverage by developing a host-side test framework for two major vendor components. Code coverage has improved from below 10% to over 50%.
- Maintained a set of Android test apps used internally for testing network connectivity.

Software Engineering Intern Jun 16 – Sep 16

- Integrated the RF card with an existing host-side test framework, increasing productivity for developers by reducing local build times from 40 minutes down to 5.
- Developed a unit test suite for testing RF card bootstrap on 15 operators.

Qualcomm Institute (formerly Calit2) La Jolla, CA
Research Intern Apr 16 – Jun 16

- Participated in a Gates Foundation project led by UCSD Medical School professors seeking to provide a reliable form of identification for healthcare in third world countries.
- Implemented autofocus and dynamic resolution control in Python for an embedded Arduino camera used for fingerprint identification on infants.

Kaiser Permanente Pasadena, CA
Software Development Intern Jun 15 – Nov 15

- Contributed as a back-end developer for a web app in Spring Framework used for actuarial/insurance purposes.
- Implemented a batch process pipeline for consolidating, validating, and transmitting sensitive membership data from multiple sources into 7 million IRS 1095-B tax forms.

NAVWAR Systems Command (formerly SPAWAR) San Diego, CA
Research Intern Jun 14 – Aug 14

- Implemented Seaweb, a CSMA-based MAC protocol for decentralized underwater networks
- Supported the research of advanced machine learning packet routing algorithms by running simulations on MATLAB and integrating multiple MAC protocols, including Seaweb.