Eric Chang

ericchangcs.com • eric.chang.cs@gmail.com
linkedin.com/in/e4chang • github.com/e4chang

Education

UC San Diego

BS Computer Engineering
Sep 13 – Mar 17
GPA: 3.42

Skills

Languages

C • C++17 • Java • HIDL
Python • JavaScript • SQL

Frameworks

Google Test • IP Protocols
Bootstrap • Node.js • Spring

Tools

GDB • Git • Wireshark
Tcpdump • Bitbake • CMake

Android Platform

Android Studio • ADB • VTS
Soong • Bazel • Repo • Gerrit

Experience

Qualcomm — San Diego, CA

Senior Software Engineer — Nov 19 – Current
Software Engineer — Jul 17 – Nov 19

- Delivered advanced networking, connectivity, and telephony features for Android end to end, from design to commercialization on millions of devices.
- Extensively designed and developed embedded software on multi-threaded, event-driven architectures using inter-process communication (IPC) in modern C++ and Java.
- Developed relationships across various teams, coordinating respective POCs to deliver large features in a timely manner.
- Contributed to a large scale re-architecture of the Radio Interface Layer (RIL) daemon by spearheading the use of modern design principles to break down highly complex functionality such as mobile data establishment, WiFi and emergency calling, and multi-SIM mode.
- Led the effort for developing a new host-side unit test framework for vendor connectivity/networking daemons on Android, which previously had little to no unit test coverage. Since then, the unit test framework has been running in automation on every new change submitted, and has grown to a suite of a few hundred test cases validating an overall code base consisting of over 100k lines.
- Supported the launch of the first 5G phones by designing a new hardware abstraction layer (HAL) interface from scratch and delivering it within a timely manner.
- Maintained a suite of Android test apps used internally for verifying Android network connectivity.

Software Engineering Intern — Jun 16 – Sep 16

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

Naval Information Warfare Systems Command (formerly SPAWAR) — San Diego, CA

Research Intern — Jun 14 – Aug 14

- Implemented Seaweb, a CSMA-based MAC protocol for decentralized underwater networks
- Utilized NS-2 and MATLAB to simulate a machine learning based IP routing protocol together with Seaweb