Waylon Peng

Software Engineer with experience in Security and Embedded development.

(510) 996-8167
waylonpeng.com
waylonpeng@gmail.com

EXPERIENCE

Nuro, Mountain View, CA // *Security Engineer*

JULY 2022 - PRESENT

Developed and implemented security requirements for autonomous vehicle systems. Led the design and implementation of embedded software for intrusion detection on realtime operating systems and automotive networks.

UC Santa Cruz, Santa Cruz, CA // *Undergraduate Researcher*

JANUARY 2022 - JUNE 2022

Surveyed openly available firmware vulnerability detection solutions. Assisted with vulnerability identification in UEFI firmware.

Google, Sunnyvale, CA // *Intern*

JUNE 2020 - SEPTEMBER 2020

Designed methodologies for performance monitoring in network modeling service used by 100+ internal developers. Designed and implemented a full-stack data visualization dashboard using Angular to investigate performance characteristics. Improved performance of existing backend queries by 50x.

Google, Austin, TX // *Intern*

JUNE 2019 - SEPTEMBER 2019

Designed procedures for analyzing string assets in Google Play services Android binaries. Trained machine learning model to predict translated string sizes. Integrated model into binary size tracking tooling for Google Play services developers.

PROJECTS

DangoDB

Sharded, fault-tolerant, RESTful distributed key-value store built using Quart and asyncio. Enforces causal consistency using a vector clock mechanism. Designed to be simple and horizontally scalable using Docker.

towa

DeepZoom image pyramid viewer web app, built using Vite.js, React and the OpenSeadragon library.

hexpiler

Lisp-like domain specific language specification and compiler for use with the Hex Casting Minecraft mod.

timetab

Multi-party event scheduling web app built using React and Firebase. Designed for accessibility, ease-of-use, and modern web standards.

EDUCATION

University of California, Santa Cruz

SEPT 2018 - JUNE 2022

Computer Science BS, Computational Mathematics BA.
3.95 GPA

SKILLS

Presented in order of familiarity.

Languages - Python, C++, C, Typescript, Shell, SQL, Rust

Databases - PostgreSQL, SQLite, Firestore

Misc - React, Angular, RTOS, Embedded Software, Linux/Unix, Git

COURSEWORK

UC Santa Cruz

- Computer Security
- Computer Systems and Asm.
- Complex Analysis
- Distributed Systems
- Intro to Number Theory
- Intro to Probability Theory
- Linear Algebra
- Natural Language Processing
- Numerical Analysis
- Systems of ODEs
- Vector Calculus

AWARDS

Dean's Honors List

UC Santa Cruz // Winter 2019 - Fall 2021

CyberForce Competition, 2nd Place

US Department of Energy // 2021

NSA Codebreaker Challenge Solver

National Security Agency // 2021