Jeffrey Shen

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EDUCATION

University of California, Berkeley **May 2023**
B.S. Electrical Engineering and Computer Science GPA: 3.82
Courses: Comp Graphics, Machine Learning, Comp Vision, Optimization Models, Comp Security, AI, Data Science Principles, Operating Systems, Algorithms, Comp Architecture, Data Structures, Discrete Math & Probability

SKILL HIGHLIGHTS

Proficient in: Python, Java, C/C++/C#, Git/GitHub, Node.js, React, Unity, pandas, OpenCV
Familiar: Go, Angular, GraphQL, MongoDB, SQL, AWS, Linux, RISC-V Assembly, Scheme, Ansible

WORK EXPERIENCE

Google – Software Engineering Intern, Mountain View, CA **May 2022 – Aug 2022**
- Designed end-to-end workflow that enables device-initiated traffic to Nest API for Matter and smart hub
- Developed new roles, policies, and permission evaluation to expose new auth check for devices (Java)
- Integrated flow in 3 APIs with QPS of >1mil using experiments and monitored for discrepancies in prod

Qualcomm – Software Engineering Intern, San Diego, CA **May 2021 – Aug 2021**
- Created automated test framework for 5G modem SW sleep prediction algorithm (C/C++, Python, XML)
- Wrote Python Jupyter notebook to analyze/visualize data from test framework for algorithm comparison
- Designed and implemented new sleep algorithm (13% more sleep time to improve modem battery usage)
- QHacks Intern Hackathon Award: full-stack web app with custom facial recognition (Python, React)

The Sipher Company – Backend Software Engineering Intern, Berkeley, CA **April 2021 – Dec 2021**
- Integrated backend AWS S3 bucket data files with MongoDB using AWS Lambda Python deployment

Northrop Grumman – Software Engineering Intern, Redondo Beach, CA **Jun 2020 – Dec 2020**
- Implemented API for Ansible Dashboard to configure VMs, deploy Ansible Roles in Node.js and MongoDB
- Created dynamic table of VM performance metrics and added Git integration on frontend with Angular

Harmony.One – Engineering Intern, Mountain View, CA **Jan 2020**
- Developed cross-shared token transfer test for multi-shard Proof-of-Stake Harmony Blockchain
- Loaded network infrastructure of blockchain testnet with multiple AWS instances, resulting in 1,000 TPS

Boeing – Software Engineering Intern, El Segundo, CA **Jun 2018 – Aug 2018**
- Created Bill of Materials Comparison Program to visualize component revisions using Python and Tkinter

EXTRACURRICULARS

FHL Vive Center for XR – Robot Open Autonomous Racing (ROAR) Simulation Team **Aug 2021 – Present**
- Built OpenDRIVE map with segmentation in Unreal Engine simulated env for Carla autonomous driving

UAVs@Berkeley – Object Detection & Classification Team **Jan 2020 – Present**
- Determined alphanumeric orientation with contour detection and template matching with 93% accuracy

Computer Science Mentors at UC Berkeley – Course Coordinator **Aug 2020 – Present**
- Organized course sections for over 70 mentors, creating worksheets, walkthrough videos, and events
- Taught Data Structures course section, reviewing data structure concepts and walking through problems

FIRST Robotics Competition (FRC) Team 1197 TorBots – President **Sept 2016 – Jun 2019**
- Programmed 140 lb. robot's control system which included state machines, PID controls & vision tracking
- Created desktop Scouting App to analyze robot performance using Xbox controllers with Unity, C#, SQL

PROJECTS

LAHacks 2021 EasyEV Web App [1st Place BlackRock Challenge] (easyev.netlify.app)
- Built web app with EV recommender and news sentiment analysis (React, GraphQL, GCP, stocks APIs)

Website Development
- Developed and deployed code for personal portfolio (jshen13.github.io) and business site (tcherbs.com)

CS170 (Algorithms) Final Project
- Solved NP Integer Linear Prog reduction using AWS, GCP, placed 6th of over 200 to find optimal solutions