

# Ankit Sachdeva

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## Education

### University of California, Santa Cruz

September 2020 - June 2024

Bachelor of Science (B.S.) in Computer Science and Engineering

**Involvements:** Cycling Club, Badminton Club, Santa Cruz Mountains Trail Stewardship, Tech4Good

**Relevant Coursework:** Programming Abstractions, Data Structures and Algorithms, Computer Architecture, Computer Networking, Computer Systems Design, Functional Programming, Assembly Language, Embedded Systems, Artificial Intelligence

## Experience

### PayPal

San Jose, CA

Software Engineer Intern

June 2022 - September 2022

- Investigated the potential of moving the settlement team's file exchange processes to a blockchain based stack
- Designed and implemented a proof-of-concept with solidity to collect metrics including throughput, reliability and robustness

### Baskin School of Engineering at UCSC

Santa Cruz, CA

Group Tutor

March 2022 - Current

- Group tutor for Computer Systems and C Programming, a course focusing on computer systems and algorithm design
- Duties include aiding students with debugging code, grading exams, and maintaining course infrastructure such as GitLab CI/CD

### Tech4Good Lab

Santa Cruz, CA

Undergraduate Research Assistant

January 2022 - March 2022

- Modified the Salesforce AI Economist tax model to analyze scaling of apprenticeship learning under Professor David Lee
- Added actions and other variables to new and existing agents in order to model different styles of apprenticeship programs

### Fox Factory

Scotts Valley, CA

Embedded Software Engineer Intern

September 2021 - January 2022

- Performed QA related tasks such as creating test plans, conducting regression testing, and overseeing environmental testing
- Developed firmware for the Live Valve project's embedded systems in C utilizing the Nordic nRF52 SDK and SoC
- Designed Python tools to be used in EOL testers to perform QA related tasks, verify hardware and firmware functionality

### Diversified Medical Records Services

Salt Lake City, CA

Software Engineer Intern

April 2021 - September 2021

- Implemented a user-intuitive report building system and dashboard to improve user experience and save time for the customer
- Refactored legacy bash SQL scripts to Python to significantly simplify codebase and save compute cost and technical debt

### Iris Logic

Santa Clara, CA

Mobile App Development Intern

July 2019 - October 2019

- Designed and developed an Android application to mirror and complement the Boltron Machine Monitoring System's capabilities

## Projects

### Pintos Operating System

[ankitsachdeva.com/pintos](https://github.com/ankitsachdeva/pintos)

- Modified the Pintos educational operating system to support priority-based thread scheduling and priority donation between threads
- Added support for a more efficient version of the "timer sleep" system call that improves performance by removing busy-waiting

### Huffman Compression Algorithm

[ankitsachdeva.com/huffman](https://github.com/ankitsachdeva/huffman)

- Implemented the lossless Huffman Compression algorithm in C with low level system calls for I/O reads and writes
- Created and utilized fundamental data structures including nodes, queues and stacks and performed bit-wise operations

### Unmasked Android Application

[ankitsachdeva.com/unmasked](https://github.com/ankitsachdeva/unmasked)

TinoHacks II - 3rd place

- Designed and wrote an Android application to scan cosmetic items and highlight potentially harmful or allergic ingredients
- Utilized Firebase and Google OCR API with image enhancement, written with a mix of Kotlin and Java in Android Studio

## Skills

### Programming Languages

- Go, Python, Bash, Java, C/C++, MIPS Assembly, RISC-V Assembly, SQL, HTML/CSS, JavaScript, Kotlin, Swift

### Technologies

- Git, SVN, Flask, Node.js, Express, React, MongoDB, NumPy, Pandas, Matplotlib, LaTeX, Docker/Podman, AWS