

Ankit Sachdeva

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Education

University of California, Santa Cruz

September 2020 - June 2023

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

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

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

Experience

PayPal

San Jose, CA

Incoming Software Engineer Intern

June 2022 - September 2022

- Incoming Software Engineering Intern for Summer 2022

Baskin School of Engineering

Santa Cruz, CA

Group Tutor

March 2022 - Current

- Group tutor for CSE 13s, Computer Systems and C Programming

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
- Adjusted application to meet Google Play Store requirements and fixed compatibility with larger phones and tablets

Projects

Pintos Operating System

ankit.works/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

ankit.works/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

Remote Suspension Controls

ankit.works/suspension

- Used ATmega32u4 microcontrollers acting as masters and slaves to create a wireless lockout system for mountain bike suspension
- Built encryption and authentication between master and slave nodes to prevent any malicious interference

Unmasked Android Application

ankit.works/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

- Rust, 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