Ankit Sachdeva

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Education

University of California, Santa Cruz Bachelor of Science (B.S.) in Computer Science and Engineering **September 2020 - June 2023**
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, Foundations of Video Game Design, Computer Architecture, Computer Networking, Computer Systems Design, Functional Programming, Artificial Intelligence, Management of Technology

Experience

PayPal **June 2022 - September 2022**
Software Engineering Intern San Jose, CA
- Incoming Software Engineering Intern on the Payments Platform team for Summer 2022

Tech4Good Lab **January 2022 - Current**
Undergraduate Research Assistant Santa Cruz, CA
- Working under Professor David Lee to utilize the Salesforce AI Economist model to analyze scaling of apprenticeship learning

Fox Factory **September 2021 - January 2022**
Embedded Software Engineering Intern Scotts Valley, CA
- 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
- Performed QA related tasks such as creating test plans, conducting regression testing, and overseeing environmental testing

Diversified Medical Records Services **April 2021 - September 2021**
Software Engineering Intern Salt Lake City, UT
- Refactored legacy bash SQL scripts to Python to significantly simplify codebase and save compute cost
- Implemented a user-intuitive report building system to improve user experience on front end and save time for the customer

Iris Logic **July 2019 - October 2019**
Mobile App Development Intern Santa Clara, CA
- Designed and developed an Android application to complement the Boltron Machine Monitoring System
- Adjusted application to meet Google Play Store requirements and fixed compatibility with larger 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 drastically improves performance

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 fundamental data structures including nodes, queues and stacks and performed bit-wise operations

Remote Suspension Controls **ankit.works/suspension**
- Used multiple arduinos acting as masters and slaves to create a wireless lockout system for mountain bike suspension
- Built encryption 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, 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