Ankit Sachdeva

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Education

Georgia Institute of Technology **August 2024 - Current**
Master of Science (M.S.) in Computer Science
Current Coursework: Human Computer Interaction, Knowledge Based Artificial Intelligence

University of California, Santa Cruz **September 2020 - June 2024**
Bachelor of Arts (B.A.) in Computer Science and Engineering
Relevant Coursework: Operating Systems, Data Structures and Algorithms, Computer Architecture, Computer Networking, Computer Systems Design, Distributed Systems, Assembly Language, Embedded Systems, Artificial Intelligence, Database Systems
Involvements: Cycling Club, Residential Assistant, SC Mountains Trail Stewardship, Badminton Club, Tech4Good Lab, Keyboard Club

Experience

PayPal **San Jose, CA**
Software Engineer Intern *June 2022 - September 2022*
- Assessed blockchain integration for settlement team's file exchange processes, identifying improvements in integrity and security
- Developed a blockchain-based proof-of-concept with Solidity to collect metrics on throughput, reliability, and robustness
- Successfully deployed a prototype that matched or exceeded the performance of existing production code by up to 40%

Baskin School of Engineering at UCSC **Santa Cruz, CA**
Group Tutor, Reader *March 2022 - June 2024*
- Group tutor and reader for Computer Systems and C Programming, Data Structures and Algorithms, and Database Systems
- Implemented GitLab CI/CD workflows that automated plagiarism detection and autograding, reducing grading time by 80%
- Supported over 600 students by providing guidance and debugging code, contributing to improved class-wide performance

Tech4Good Lab at UCSC **Santa Cruz, CA**
Undergraduate Research Assistant *January 2022 - March 2022*
- Collaborated with researchers to modify the Salesforce AI Economist model, implementing agents to model apprenticeship learning
- Utilized PyTorch and custom Salesforce AI tools to optimize agent behaviors, improving simulation performance and scalability

Fox Factory **Scotts Valley, CA**
Embedded Software Engineer Intern *September 2021 - January 2022*
- Developed firmware in C for the wireless Live Valve suspension system, leveraging the Nordic nRF52 SDK and SoC
- Led QA efforts on prototype hardware and software, proactively identifying issues and implementing solutions
- Designed comprehensive test plans, including regression and environmental testing, ensuring robustness across conditions

Projects

Huffman Compression Algorithm **ankitsachdeva.com/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

tacticians.tools **ankitsachdeva.com/ttools**
- Leveraged the Riot Games API to analyze the match history of hundreds of TFT games, identifying top-performing tacticians
- Developed and hosted a SQL database on AWS, enabling storage and retrieval of match history data from games
- Engineered and optimized RESTful API endpoints in Python to fetch and process game data in real-time

Pintos Operating System **ankitsachdeva.com/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

Skills

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

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