Sachin Jain

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Programming Languages: Python, JavaScript, TypeScript, C/ C++, Go, Java, HTML, CSS, SQL
Frameworks: Flask, React**,** NumPy, Pandas, Node, Express, Next, Angular, Redux Tensorflow, PyTorch, Tableau
Technologies: Git, AWS (S3, EC2), PostgreSQL, ElasticSearch, OpenSearch, Docker, Kubernetes, Linux, MongoDB
Coursework: Data Structures & Algorithms, Object Oriented Design, Computer Systems, Computer Architecture, Software Engineering, Embedded Systems, Logic Design, Discrete Mathematics, Operating Systems.

EDUCATION

University of California Santa Cruz   **June 2026**
- BS Computer Engineering, concentration in Computer Systems (**GPA**: 4.0 with Dean's Honor)

WORK EXPERIENCE

Nutanix   **September 2024 - December 2024**
Software Developer Co-op Capstone
- Developed **ETL** data pipeline utilizing **OpenSearch** - **Kubernetes**, Filebeat, Logstash, migrating **1100+** gigabytes of data into Dremio-Nessie (Iceberg) data lake.
- Developed **CI/CD** pipeline with Mage AI using python **pandas**, SQL, dbt, transforming **1000s** of JSON files to SQL into Dremio data lake integrated with **Postgres**.

Leucine Tech   **June 2024 - August 2024**
Software Engineering Intern
- Designing and implementing PostgreSQL databases, streamlining the data management and improving query performance, reducing application load by **15% for 300+** Pharmaceutical clients
- Improved application stability by debugging, fine tuning OpenAI's **GPT-4 API** for converting natural language processing to sql and optimizing Java code, which resolved critical issues improving data processing speed **by 25%.**

Tech4Good Lab UCSC   **March 2024 - Present**
Software Developer - Lead Causeway Dev
- Developed API endpoints using **Angular** with NgRx-Redux including writing Redux selectors and queries to efficiently manage state and handle real-time data synchronization on **Firebase**.
- Developed, deployed **15+** containers and components, coordinating with **150+** engineers using **Agile, Scrum** practices.

Neuromorphic Computing Lab UCSC   **March 2024 - September 2024**
Undergrad Researcher - NLP and ML,   Paper
- Reviewing and debugging code at neuromorphic research lab responsible for developing snnTorch, a spiking neural network python **pytorch** library with **50,000+** downloads.
- Developed a tutorial notebook and authored a report **paper** on Event-based Lip-reading to assist researchers in understanding a new approach: the Multi-grained Spatio-Temporal Features Perceived Network (MSTP).

PROJECTS

Chess AI Tutor - Pawn Up! @Winner Cal Hacks 2024 (UC Berkeley) | **Github** | **Devpost** | (React, Flask, Llama)
- Developed an AI chess training platform (React, Express, Flask); won CalHacks ChromaDB with **2000+** participants.
- Engineered semantic chess search using ChromaDB and Gemini embeddings for natural language game queries with real-time move analysis using Llama 3.1 with **Groq** for personalized training and puzzle generation.

Lift-Link | **Github** | (Next, PostgreSQL, Prisma, TypeScript)
- Developed a web app for UCSC students to form ride-sharing groups, saving costs with Uber/Lyft integration.
- Used TypeScript with Next, Prisma and Postgres (neon) for the app with advanced SQL queries to match rides to share within 1 mile of a common destination, **50+** users registered.

Task-Flow | **Github** | **Demo** | (React-Native, Go, MongoDB)
- Developed a mobile app with **React-Native, Go** and **MongoDB** for Android and iOS focusing neurodivergent audience to help them prioritize tasks with unique features like ranking algorithm for tasks, pomodoro timer, statistical task view.

Multi-Threaded Server Program | **Github** | (C, Regex, semaphores, mutexes)
- Multiple Threading Server in C takes n threads requests. Uses queue data structure and a read-write lock to ensure synchronization. Achieved **100+** requests/sec and **50ms** Latency

CONCEPTS

Machine Learning, Data Analysis, Software Engineering, Web Frameworks, Databases, Full stack, Frontend, Backend, Cloud Computing, Parallel & Concurrent Programming, Virtual Memory, Multithreading, REST APIs, NLP, Embedded Systems, Mobile applications development