

Varun Sahni

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EDUCATION

Purdue University

West Lafayette, IN

B.S. Computer Science; Expected May 2028

Aug. 2025 – May 2028

- 3.68 GPA; Coursework: ECE 264 (Advanced C Programming), CS 180 (OOP); ECE 368 (Data Structures & Algorithms, in progress)
- Focus: Computer Architecture, Algorithms, Systems, Optimization

University of California, Berkeley (Summer Sessions)

Berkeley, CA

Coursework in Computer Architecture & Data Science

Summer 2023

- CS 61C: Comprehensive study of assembly, C, parallelism, pipelining, warehouse scale compute
- DATA 8: Statistical analysis and inference to real-world datasets

EXPERIENCE

Paasa (YC S24, Fintech Startup)

Delhi, IN

Software Engineer Intern

May 2026 – Aug. 2026

- Architected Paasa's model-portfolio platform end-to-end — one core service centralizing all portfolio management, with an alpha & Monte Carlo analytics engine, automated rebalancing, and performance/market notes to subscribers for wealth managers, advisors & clients
- Eliminated manual portfolio order placement, saving 200+ ops hours/week, by shipping the platform's audited, API-driven execution layer
- Cut instrument ingestion from a 6-hour cron to minutes and ended manual reconciliation by rebuilding it on IBKR FTP feeds & OpenFIGI IDs (~90K instruments); enabled Redis Search fuzzy search (1–2s to 100–200ms)
- Modularized cash systems (reconciliation & ledger) and a ~10K-line monolithic trading service through ~10 authored design docs, hardening for scale as net AUM grew \$15M to \$80M on a 5-engineer team
- Built Paasa's first FIX trading engine in Kotlin — QuickFIX core behind a typed gRPC/Protobuf API

CortX (Healthcare Startup)

Remote / India

Co-Founder & Founding Engineer

2022 – 2024

- One of 5 core founding members; led development of a medical management platform (React, Express.js) that won 1st place at the ShriTeq International Hackathon
- Recognized with the *Young Changemaker Award* by the Dept. of Biotechnology, Govt. of India

Self-Directed Computer Vision Research

Remote

Researcher

Jun. 2023 – Jul. 2024

- Developed lightweight CNN for GI disorder detection (97.82% accuracy) on HyperKvasir
- Presented at 5 venues: UMich AI Symposium, IEEE CICT, SLAS Data 2024, SCCUR, IFIC Zhejiang Lab
- First-author paper published at IEEE ICSIGSYS 2026 (IEEE Xplore)

SELECTED PROJECTS

Flux — Live data-streaming proxy API (flux.vsahni.me | GitHub)

- Serverless-friendly SSE/WebSocket proxy for streaming from serverless environments; documented on my blog

bun-sqlite-cache — Caching layer for Bun + SQLite (GitHub)

- In-memory TTL/LRU cache for Bun & SQLite benchmarked at ~90K reads/s (~11μs/read); 1K+ downloads

CS61CPU — RISC-V CPU in Logisim

- 5-stage pipeline implementation; explored hazards, caching, and memory

TECHNICAL SKILLS

Languages: Python, C, Java, Kotlin, JavaScript/TypeScript, SQL (PostgreSQL, SQLite, MySQL), RISC-V

Frameworks and Runtimes: React, Next.js, Svelte/SvelteKit, Astro, Bun, Node.js, Flask, FastAPI, Django, Express, Fastify, TailwindCSS, gRPC/Protobuf

ML: NumPy, Pandas, Scikit-learn, TensorFlow, Keras, Seaborn

Tools: Git, Docker, Redis, VS Code, Vim