

AMAN DESAI

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EDUCATION

BS Computer Science, *University of California, Santa Barbara* (3.76 GPA) *Sep 2023 - 2027*

Relevant Coursework: Computer Architecture, Hardware/Software Interfaces, Operating Systems, Distributed Systems, Machine Learning, Artificial Intelligence, Data Structures and Algorithms, Internet Protocols (SJSU)

TECHNICAL SKILLS

Languages: C/C++, Python, SystemVerilog, Verilog, RISC-V, Rust, Java, JavaScript, TypeScript, SQL, Bash, HTML, CSS

Platforms, Frameworks & APIs: Docker, AWS (Lambda, DynamoDB, OpenSearch), Selenium, React, Next.js, Vercel, PyTorch, TensorFlow, Jupyter, Chrome Extensions

EXPERIENCE

Undergraduate Researcher, *Computer Architecture (Arch) Lab* *Santa Barbara, CA | Apr 2024 - Present*

Paper submitted to ASPLOS 2026

- Designing open-source HPC architectures and accelerator components using SystemVerilog/Verilog with [Cohort & OpenPiton](#), exploring OS-hardware co-design for next-generation research systems
- Developing and verifying hardware modules with GTKWave and Icarus Verilog, achieving measurable improvements in performance and correctness
- Bootstrapping RISC-V for ARM64 on VMs and deploying Linux on FPGAs to evaluate complete HW/SW co-design workflows

Software Development Engineer Intern, *Amazon Web Services* *Seattle, WA | Jun 2025 - Sep 2025*

- Closed a critical observability gap by architecting a full-stack, real-time monitoring system for CloudFormation contract tests, eliminating manual result parsing across all AWS regions.
- Built and deployed a cross-account, cross-region Lambda pipeline to securely ingest, transform, and index large-scale production test data into OpenSearch, enabling near real-time search and analytics.
- Implemented secure IAM role chaining and fault-tolerant invocation patterns to support thousands of daily deployments globally.
- Rolled out the dashboard org-wide, improving on-call visibility and accelerating incident response across multiple engineering teams.

Software Engineering Intern, *Blockhouse* *Remote (New York), NY | Sep 2024 - Dec 2024*

- Built full-stack features with Next.js and Django to deliver stock predictions across 600 firms with 4 holdings each
- Designed ETL pipelines with web scraping + yfinance API to fetch live data, calculated TWAP/VWAP metrics, and benchmarked savings against ML model predictions

LEADERSHIP

President and Founder, *ACM Industry @ UCSB* *Santa Barbara, CA | Dec 2024 - Present*

- Founded and lead a 50+ member student organization creating industry partnerships, hosting workshops, and running multi-quarter projects
- Manage 3-4 industry-mentored initiatives per quarter, collaborating with engineers from **Google**, **NVIDIA**, **PwC**, **Cisco**, and more to guide project teams of 6-8 members
- Secured \$6,000+ in corporate sponsorships and internship placements for 10% of members within the first 5 months

PROJECTS

PwC Consulting Project - FinSight *Santa Barbara, CA | Mar 2025 - Jun 2025*

- Led 8-student team on ACM Industry's first industry project with PwC, defining requirements and timelines with client stakeholders
- Trained unsupervised (Isolation Forest, Autoencoders) and time-series (XGBoost) models on synthetic financial datasets
- Built a full-stack web app with interactive dashboards to visualize anomalies and forecast financial trends

Luminous Learn (AI Project [LA Hacks](#)) *Santa Barbara, CA | Mar 2025 - Jun 2025*

- Democratizing learning by scraping trusted sources and using LLMs to generate instant, structured, lecture-style course content

MedKnight (AR + AI Project [CalHacks 11.0 Winner](#)) *Los Angeles, CA | Oct 2024 - Dec 2024*

- Developed an AR assistant for first responders using MetaQuest, guiding critical medical procedures in real time
- Integrated OpenAI + Deepgram for speech-to-text and contextual responses, with Fetch.ai + SingleStore providing scalable agentic execution