

ROSHAN SCOTT SANJEEV

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EDUCATION

B.S. in Computer Science & Engineering | GPA: 3.79 - University of California, Merced Expected: Dec 2026

- **Relevant Coursework:** Operating Systems, Intro to Deep Learning, Intro to Human Comp. Interaction, Data Structures(C++), Algorithm Design & Analysis (C/C++), Full-stack Web Dev., Computer Organization & Assembly Language (C, MIPS)

EXPERIENCE

Software Engineer Intern, Enterprise Application Services - University of California, Merced Aug 2025 - Present

- Emphasized with stakeholders to build web applications serving ~2,500 users daily, resolving **Jira** tickets in **Agile** sprints.
- Developed secure **REST APIs** & integrated Microsoft **Azure Entra ID OAuth 2.0**, driving an 80% increase in staff productivity.
- Architected hosting with **Nginx & Gunicorn** for **Flask/Redis** backend with **React** frontend for long-term reliability.
- Utilized **GitHub** to automate releases, build workflows using **GitHub Actions**, and manage **CI/CD** pipelines.

Machine Learning Research Intern - Mi3 Lab (Merced, CA) Jun 2025 - Present

- Published & presented [paper](#) at **CVPR 2025** & **ICCV 2025** conferences for our **VLLM**, which generates real-time navigation instructions for users with visual impairments in complex urban environments.
- Outperformed GPT-4o baseline by 43.84% via **frame sampling, finetuning** VideoLLaMa3-7B on **preprocessed dataset, prompt engineering, & post-processing** across ROUGE-L, Timing F1/AUC, & Action F1 metrics.
- Developed [data visualisations](#) using **Pandas/Matplotlib & Python** for **JSON** post-processing for the paper & presentation.

Product Development Intern - Plant Culture Systems (Irvine, CA) Jul 2024 - Oct 2024

- Developed & designed the AI landing page for [OurGarden](#), using **Flutterflow**, integrating **UI/UX** feedback to enhance targeted user engagement for 500+ users.
- Led image analysis feature as A.I. subteam lead, improving engagement metrics by ~50% in **Agile** sprints with customers & users.
- Integrated **ChatGPT API** for chatbot queries, **Firebase database** for user management & **Figma** for **frontend** planning.

Software Engineer Intern - PosTrue (Merced, CA) Mar 2024 - Jun 2024

- Collaborated with customers to define requirements for posture analytics platform, translating ergonomic feedback needs into technical specifications for **Django** web application.
- Designed **UI/UX** with **HTML, CSS, JavaScript, & Bootstrap**, conducting usability testing while following brand standards.
- Created a **PostgreSQL** analytics dashboard to visualise real-time sensor data & deliver actionable posture insights.

PROJECTS

Clock-In | *TypeScript, Next.js, React, PostgreSQL, Hono, Drizzle ORM, Supabase, Docker, Tailwind CSS*

- Engineered full-stack productivity platform using **Next.js 16, TypeScript, & PostgreSQL** with 15+ **RESTful API** endpoints, for 50+ users, **JSONB-based** social discovery queries, & timezone-aware streak tracking.
- Built video processing pipeline for frame interpolation algorithms to capture, encode, & generate MP4 timelapses client-side.
- Architected scalable video hosting with **Supabase storage** integration & **PostgreSQL** database via **Drizzle ORM**.

PoseVision | *Python, AWS EC2, React, Docker, Flask, Javascript, MediaPipe, OpenCV, Git - SASEHacks*

- Won 1st place at SASEHacks in a team of 3, for building an injury prevention tool utilising **deep learning & pose estimation** from user-uploaded videos for injury prevention in the squat.
- Developed **Python** script with **MediaPipe & OpenCV** to detect squat asymmetries & enhance **UI/UX** with visual feedback.
- Containerised **Docker** pipeline deployed on **AWS EC2**, with **Flask** integration using **git** (version control) to display results.

Credit Compass | *Python, JavaScript, React, REST API, HTML, CSS, Flask - HackMercedX*

- Won Alumni Prize in a team of 3, for developing an AI-powered platform that delivers long-term, personalised credit card recommendations by leveraging real-time internet data.
- Built a **REST** pipeline with the **Letta AI API, JavaScript & HTML/CSS** to display the personalised credit timeline in **Flask**.

LEADERSHIP & COMMUNICATION

AI Campus Ambassador - Perplexity (Merced, CA) September 2025 - Present

- Developed & executed a responsible AI adoption marketing strategy for Comet, an **AI agentic browser**, on campus through tailored [presentations](#) engaging 300+ in-person students to date & working toward 500 sign-ups for hackathon sponsorship.

Executive Board/Recruitment - Professional Engineering Fraternity, Theta Tau (Merced, CA) Mar 2024 - Present

- Led a committee of 9, with a \$2,000 budget & organised class presentations to 1,000+ students & increased chapter growth 70%.

SKILLS

- **Languages:** Python, JavaScript, SQL, Java, HTML/CSS, C/C++, LaTeX
- **Frameworks:** Next.js, Flask, Django, React, Pandas, Matplotlib, MediaPipe, OpenCV, Bootstrap, FlutterFlow
- **Tools & Platforms:** Azure, AWS EC2, Git, Docker, Redis, PostgreSQL, Linux, Figma, Microsoft Suite, Claude Code, Firebase
- **AI/ML:** MCP, Computer Vision, PyTorch, TensorFlow, CrewAI Agents, HuggingFace, Vapi, Nous, Masumi
- **Methodologies:** OOP, Agile, Scrum, Responsive Design, UI/UX, CI/CD, DevOps