ROSHAN SCOTT SANJEEV

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EDUCATION

B.S. in Computer Science & Engineering | *GPA: 3.80 - University of California, Merced (Merced, CA)*   Expected: Dec 2026
- **Certificates:** Meta Back End Developer Professional Certificate
- **Relevant Coursework:** Data Structures(C++), Algorithm Design & Analysis (C/C++), Full-stack Web Dev., Computer Organization & Assembly Language (C, MIPS), Linear Algebra & Differential Equations, Linear Analysis, Vector Calculus

SKILLS

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

EXPERIENCE

Software Engineer Intern | *Agile, Python, Azure, Flask, Redis, APIs, HTML/CSS, JS, Linux - UC, Merced*   Aug 2025 - Present
- Emphatized with UCM **stakeholders** in **Agile** sprints to build DineBoard, an enterprise system serving ~2,500 students daily.
- Engineered secure **REST APIs** with stateless OAuth 2.0 authentication integration, driving 80% increase in productivity for staff.
- Architected **Flask/Redis** backend with **Nginx** & **Gunicorn** & **React** frontend for long-term reliability & performance.

Machine Learning Research Intern | *Computer Vision, PyCharm, VLLM, HPC, Linux - Mi3 Lab (Merced, CA)* Jun 2025 - Present
- Co-authored **paper**, published & presented at CVPR 2025 & ICCV 2025 conferences for our **VLLM**, which generates accurate real-time navigation instructions for users with visual impairments in complex urban environments.
- Outperformed GPT-4o baseline by 43.84% via **finetuning** VideoLLaMa3-7B on **preprocessed dataset**, **prompt engineering**, **frame sampling**, & **strategic 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 | *APIs, Agile, Figma, Firebase, Flutterflow - Plant Culture Systems*   Jul 2024 - Oct 2024
- Designed & developed 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..
- Utilised **ChatGPT API** for chatbot queries, **Firebase database** for user management & **Figma** for **frontend** planning.

Software Engineer Intern | *Python, Django, PostgreSQL, JS, Bootstrap, HTML/CSS - PosTrue*   Mar 2024 - Jun 2024
- Developed **Django** website to display wearable sensor data, delivering posture analytics with ergonomic feedback for customers.
- Designed **UI/UX** with **HTML, CSS, JavaScript, & Bootstrap,** following brand standards & **responsive design**.
- Created a **PostgreSQL** analytics dashboard to visualise real-time sensor data and deliver actionable posture insights

HACKATHON PROJECTS

Fullstack AI Developer | *Python, AWS EC2, Linux, Docker, Flask, MediaPipe, OpenCV, Git - SASEHacks*
- Won 1st place for developing **PoseVision** in a team of 3, 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.

Fullstack AI Developer | *JavaScript, REST API, HTML, CSS, Flask - HackMercedX*
- Won Alumni Prize for developing **Credit Compass** in a team of 3, 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 on campus through tailored presentations to clubs & classes engaging 300+ in-person students to date & working toward 500 sign-ups to secure Perplexity hackathon sponsorship.

Hackathon Organiser - *HackMercedX (Merced, CA)*   June 2025 - Present
- Worked in Backend & Outreach teams, managing hackathon website while pursuing company sponsorships & participant outreach.

Executive Board/Recruitment - *Professional Engineering Fraternity, Theta Tau (Merced, CA)*   Mar 2024 - Present
- As recruitment chair, led a committee of 9, with a $2,000 budget & organised class presentations to 1,000+ students.
- Increased chapter growth by 70% through 5 daily events with **50+** daily attendees & created a detailed manual for future chairs.
- As Executive Board, oversaw chapter operations & presented to regional executives preparing to run for President next semester.