

ROSHAN 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
- **Coursework:** Data Structures(C++), Computer Organization & Assembly Language (C, MIPS), Linear Algebra & Differential Equations, Discrete Mathematics, Calculus 3 (Vector/Multivariable), Probability & Statistics

SKILLS

- **Languages:** Python, C/C++, Java, JavaScript, MySQL, MIPS Assembly, HTML/CSS, LaTeX
- **Frameworks:** Flask, Django, React, OpenCV, Bootstrap, Flutterflow
- **Tools:** Git, Docker, AWS EC2, Render, Firebase, Supabase, Figma, WebSockets, WebRTC, Bash, SSH, SQLite
- **AI/ML :** Computer Vision, VideoLLaMA3, CrewAI, MediaPipe, Nous, NumPy, PyTorch, TensorFlow, Masumi
- **Methodologies:** REST APIs, OOP, Agile, Scrum, DevOps, CI/CD, Responsive Design

EXPERIENCE

Machine Learning Research Intern | *Computer Vision, Python, VideoLLama3 - Mi3 Lab (Merced, CA)* Jun 2025 - Present

- **Co-authored 1st-place** 2025 AVA Instruction Generation Track [paper](#), & presented at the **CVPR conference**.
- Engineered an end-to-end HPC inference pipeline around **VideoLLaMA3-7B** to produce **real-time** navigation **instructions** for **users** with **visual impairments** in complex urban environments.
- Developed a **Python** [post-processing](#) script & designed [data visualization](#) scripts using **Pandas & Matplotlib**.
- **Surpassed the GPT-4o baseline** on the average of ROUGE-L, Timing F1/AUC, & Action F1.

Full-Stack Engineering Internship | *APIs, Python, Firebase, Flutterflow - Plant Culture Systems (Remote)* Jul 2024 - Oct 2024

- Built the **AI landing page** for [OurGarden](#), utilized by **400+** users with **frontend/backend** integrations with **Flutterflow**.
- Spearheaded image analysis **API** feature as **A.I team lead** in an **AGILE scrum** project guiding development.
- Utilized **Firebase database** for **backend** user chat management & recommended questions.

Web Development Internship | *Django, SQL, JavaScript, Bootstrap, HTML, CSS - PosTrue (Remote)* Mar 2024 - Jun 2024

- Developed a **Django**-based website to display analytics from a posture-sensing device to promote postural improvement.
- Created a **frontend** displaying analytics utilizing **HTML, CSS, JavaScript, & Bootstrap** with a **SQL backend** for user info.
- Designed to display postural analytics over time with data visualizations, ensuring a seamless user experience.

HACKATHONS

Fullstack Developer | *AWS EC2, Docker, Flask, MediaPipe, OpenCV, DeepLearning - SASEHacks (Merced, CA)* Apr 2025

- Won **1st place** for developing [PoseVision](#), an **exercise pose estimation** tool utilizing **deep learning** to deliver real-time feedback & injury prevention techniques from user-uploaded videos.
- Built a **Python** algorithm using **MediaPipe & OpenCV** to calculate joint angles & detect & display squat asymmetries.
- Used **Flask** to process uploads, run detection, & display results in a clean, responsive UI.

Fullstack Developer | *JavaScript, APIs, HTML, CSS - HackMercedX (Merced, CA)* Mar 2025

- Awarded **Alumni Prize** out of **120** participants for developing [Credit Compass](#), a long-term personalized **credit card recommendation system**.
- Developed CelesteAI, an AI chatbot that provides real-time financial insights & remembers user preferences.
- Developed an AI chatbot & vertical timeline UI using **Letta API** for real-time financial insights, with **Flask**.

PROJECTS

Fullstack Developer | *React, Flask, Websockets, WebRTC - OmniNote* Apr 2025

- Built [OmniNote](#), a **real-time collaborative text editor** enabling multiple users to co-author documents with presence indicators & text formatting.
- Used native **WebSockets** to manage **live updates & content syncing** between frontend & in-memory backend.
- Implemented a Flask server with a responsive **React** interface with seamless user onboarding & intuitive formatting tools.

LEADERSHIP

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

- As recruitment Co-Chair, led a committee of **9**, managing a **~\$2000 budget**, conducting **weekly meetings**, & planning for **3 months** to organize recruitment events.
- Organized **7 class presentations** with an outreach of **1000+** students with daily information tabling.
- Led **5 recruitment events** with **50+** daily attendees, secured **30+** interviews, & created instructional manual for future chairs.

INTERESTS: Travel, Weight Lifting, Golf, Cooking, Biomechanics/Hypertrophy