Sai Ganesh Chamarty

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Education

University of California, Davis *Sept 2023 – June 2027*
B.S. in Computer Science (Junior) *GPA: 3.46 / 4.0*
- **Relevant Coursework:** Data Structures & Algorithms (C++ & Python), Machine Learning & Computer Vision (Python), Computer Architecture, Operating Systems (C/C++)

Skills

- **Robotics & Hardware:** NVIDIA Jetson, Isaac Sim, Stereo Vision, URDF, Fusion 360, LeRobot SO-ARM 101
- **Programming:** Python, C/C++, Swift, Java, JavaScript, Bash
- **ML & Perception:** CNNs, PyTorch, TensorFlow, Hugging Face, ML Pipeline Development, NVIDIA GROOT N1.5
- **Systems:** Linux/Ubuntu, CI/CD, GitHub Actions, SSH Automation, Git Version Control, Software Testing, Hardware Testing, Process Automation, Documentation
- **Soft Skills:** Communication, Willingness to learn, Collaborative in small teams, Teamwork, Proactively asking questions

Projects

Countertop Collaborative Robot — *Junebase Robotics* Website ↗
(Jetson Orin Nano, Isaac Sim, Fusion 360, Python, CI/CD)
- Designed and developed a dual-arm countertop collaborative robot by modeling mechanical components in Fusion 360, assembling hardware, and running kinematics and motion tests using NVIDIA Isaac Sim.
- Developed and tested a robotics software stack written in Python, where computer vision and control software interacts directly with hardware on a Jetson Orin Nano to support object detection and pick-and-place tasks.
- Built process automation using GitHub Actions CI/CD to deploy and test Python-based perception code from a remote server to the Jetson, and documented test results and system behavior on GitHub to support verification and validation (V&V) and enable repeatable testing for a two-person team.

Model 28 — **Research Project** *(Python, CNN/MLP, Flask, Ubuntu Server)* *Research Page* ↗
- Led a team of five in an Intro to Machine Learning course to design and run controlled tests comparing MLP, Logistic Regression, and CNN models for scenery classification using the Intel Image Classification dataset.
- Deployed the trained models as a Flask API and documented evaluation results on GitHub, enabling repeatable testing and direct comparison of model accuracy and behavior in a server-based environment.

Semantic Segmentation with U-Net *(Python, PyTorch)* *YouTube Demo* ↗
- Designed and developed a U-Net convolutional neural network as part of a Computer Vision course, collaborating with a small, fast-paced team of three.
- Cross-validated three trained segmentation models across two different datasets to evaluate generalization, documenting testing results on GitHub to compare performance and improve reliability of the segmentation pipeline.

Work Experience

Hardware Sales Associate — *The Home Depot, Inc. (Milpitas, CA)* *June 2024 – Present (Seasonal - Summers)*
- Quickly learned hardware products and in-store workflows to assist customers effectively, contributing to improved customer satisfaction and supporting a reported increase in department sales through clear communication and teamwork.

Orientation Team Lead — *University of California, Davis* *Sept 2023 – Present (Seasonal)*
- Led and supported student teams in a fast-paced, hands-on orientation environment, continuously learning from professional staff and peers, and earning a recommendation for Student Manager due to strong collaboration and initiative.

Leadership & Technical Communities

Founder — Junebase Robotics (Research & Project Lab) *July 2025 – Present*
Founding President — Swift Coding Club at UC Davis *Jan 2025 – Present*
Software Director — SacHacks at UC Davis *June 2024 – Apr 2025*
Member — Google Developer Student Club (GDSC) at UC Davis *Dec 2024 – Apr 2025*