# JAYANTI LAHOTI

+1 (858) 220-0205 | jlahoti@ucsd.edu | linkedin.com/in/jayanti-lahoti | github.com/jayantiii | jayantilahoti.dev

## EDUCATION

**MS in Computer Science Engineering, University of California, San Diego, USA** **September 2024 - June 2026**

- GPA: 4, Specialization: Artificial Intelligence
- Relevant coursework: Deep Learning, Adv Data Text Mining, Adv Software Engineering, ML for Music
- Teaching Assistant (TA) at Global Policy School mediating and mentoring an AI summer school
- Teaching Assistant at Qualcomm Institute in UCSD for Google Cloud Platform Machine Learning

**International Elite Summer School in Robotics and Entrepreneurship, Denmark** **August 2025**

- Selected and awarded full funding to attend the program in Odense, a leading global hub for robotics innovation.

**B.E in Computer Science Engineering, BMS College of Engineering, India** **August 2019 - August 2023**

- GPA: 8.55, Relevant coursework: C, Java, Big Data Analysis, Data Structures, Database Systems, Artificial Intelligence
- Organized NGO events as the core committee, taught chess, and built a chess club website with live API integration.

## SKILLS

**Programming Languages:** Python, Shell Scripting, JavaScript, TypeScript, Go, C/C++
**Frontend & Web**: HTML, CSS, React, Next.js, NodeJS, Framer, Redux, TailwindCSS
**Database Management:** SQL, NoSQL, PostgreSQL, Firebase / Firestore, Supabase, Google BigQuery
**Systems and Networking**: Linux/UNIX, Multithreading, low-latency systems, TCP/IP, socket programming, Kafka
**Machine Learning:** NumPy, Pandas, PyTorch, Tensorflow, Keras, OpenCV, scikit-learn**,** Hugging Face Transformers
**Cloud:** Docker, Kubernetes, GitHub Actions, Jenkins, Helm, Heroku, Google Cloud Platform, Microsoft Azure, AWS
**Tools and Frameworks:** Git, CMake**,** Cypress, Jest, PyTest, Selenium, GitHub Actions, Postman, Prometheus, Grafana
**Certifications:** Agile SAFe 6 Practitioner, Google TensorFlow Developer, GCP ML, Amazon ML School, Microsoft Azure AI

## PROFESSIONAL EXPERIENCE

**Perception Researcher, Autonomous Vehicle Lab** **October 2024 - June 2025**

- Engineered a ROS (Robot Operating System) node for the object detection stack, publishing real-time camera detections to enable downstream prediction tasks in autonomous vehicles, and also researched multimodal sensor fusion algorithms.

**Software Engineer, Hewlett Packard Enterprise** **August 2023 - August 2024**

- Reduced average server management time by over 35% by implementing a React-based UI integrated with backend microservices, featuring summary cards, device tables, notification pop-ups, and complex firmware update workflows. Also, authored detailed documentation and conducted onboarding sessions for 10+ new engineers in the team.
- Architected CI/CD pipelines and automated Rancher Kubernetes pod deployments for UI and API handler services using Jenkins, Helm, and Docker, eliminating 12+ hours of manual work per sprint and accelerating release cycles.
- Collaborated on the development of a scalable microservices platform, leveraging gRPC with Protocol Buffers and Nginx for high-performance, low-latency communication between services. Integrated automated testing frameworks, increasing code coverage from 10% to over 95% and improving system reliability.

**Research and Development Intern, Hewlett Packard Enterprise** **January 2023 - July 2023**

- Built a mirage mock server that mirrored production APIs and supported 10,000+ records simultaneously, eliminating 80% of development dependencies. This enabled parallel development, accelerating feature delivery by nearly one-third.
- Designed and implemented an end-to-end server inventory dashboard for device reservation and tracking, reducing manual tracking effort by 45% and providing stakeholders with statistical insights for faster and better decision-making.
- Engineered test cases for all frontend functionalities and partnered with the QA team to create a reusable unit testing module, cutting redundant code by 40% and boosting coverage and testing efficiency using Cypress and Python.

## PROJECTS

**Lego Segmentation and Pose estimation in Collaboration with the LEGO Group**

- Developed a vision system to segment five lego piece types and estimate their 6D pose, augmenting the dataset with synthetic samples from CAD renderings and training on 20,000+ images to improve pose estimation accuracy.

**Multi-Waste Segregation using Computer Vision and a Robotic Arm**

- Led a four-person team to design and implement a robotic waste segregation AI system with edge computing, integrating YOLOv5 object detection and serial communication for 3D-printed robotic arm manipulation. Achieved 80% system accuracy and published the work in a peer-reviewed journal. [Publication]

**AI for Wind Energy Vibration Data Analysis with FruitPunch AI**

- Collaborated globally to build time-series ML models for wind turbine blade damage detection, engineering spectral and statistical features that improved classification accuracy by 15% through advanced preprocessing and visualization.

**Hack-Connect - A Platform to Meet People to Collaborate**

- Developed a university collaboration platform with Next.js, TypeScript, REST APIs, and Redux state management to connect students for hackathons and side projects with project listings and messaging in a responsive UI.