

AADITYA MALANI

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ACADEMIC QUALIFICATION

Bachelor of Technology in Computer Science and Engineering (Data Science), Dwarkadas J Sanghvi College of Engineering, Mumbai, CGPA: 9.0/10
September 2022 - May 2026 (expected)

PROJECTS

1. Advanced Multimodal Federated Learning-A Privacy-Focused Approach to Social Network System

- Designed FLT-PR, a privacy-preserving recommender where training happens on-device; only lightweight model updates/embeddings are shared, keeping raw user data local by default.
- Implemented dynamic server-side clustering to group similar clients and tailor aggregation, which reduced communication and improved convergence under non-IID behavior.
- Achieved about a 15% lift in recommendation quality over baselines while adding differential-privacy noise at aggregation to protect updates without sacrificing personalization.

2. Campus Hall Booking and Scheduling Platform

- Led a 6-member team to design and build a full-stack hall booking platform; owned the backend in Node.js/Express with secure REST APIs, login/roles, and a reliable booking/availability flow.
- Organized the work using Agile in GitHub: set up sprints and task boards, ran planning and review meetings, and wrote clear feature notes and simple API docs so everyone stayed aligned.
- Worked closely with the client: turned their policies into easy-to-use settings (approvals, blackout dates), ran basic usability and security checks with them, and improved the product based on their feedback.

INTERNSHIPS

1. Mantrika.AI, Technical Intern

February 2025 – Present

- Engineered core platform infrastructure by single-handedly developing the user authentication system and designing the multi-stage candidate progression pipeline, enhancing platform stability and user experience.
- Led the integration of a facial recognition service for candidate identity verification, navigating complex security and usability requirements to ensure a reliable proctoring solution.
- Architected an end-to-end technical interview feature, designing a real-time AI feedback loop that enabled an audio-based AI agent to dynamically analyze, evaluate, and respond to a candidate's live code submissions.

2. IIT Bombay, Research Intern

January 2025 - Present

- Developed an autonomous weed detection system by fusing LiDAR, NIR, and RGB sensor data, and diagnosed model failures by leveraging explainability tools like Grad-CAM to analyze misclassifications.
- Engineered a solution that significantly improved precision by implementing class-specific confidence thresholds, tightening IoU/NMS parameters, and augmenting the dataset with hard negatives identified through model explanations.

TECHNICAL SKILLS

- **Languages:** Java , JavaScript , TypeScript, and C.
- **Web Development:** MERN Stack (MongoDB, Express.js, React, Node.js), RESTful APIs, Tailwind CSS, Postgres, and WebRTC.
- **Cloud & DevOps:** Amazon Web Services(AWS) , Docker.
- **Tools & Platforms:** Git, GitHub, Postman, Streamlit, Canva, VS Code, and Jupyter Notebooks.

ACHIEVEMENTS/CO-CURRICULAR/EXTRACURRICULAR

- Winner at Smart India Hackathon among 45,000 teams organized by the Government of India.
- Winner at Synergy 1.0, organized by the DJ Sanghvi College of Engineering.
- Runner-Up at Technovate Hackathon hosted by SPIT-Mumbai.
- 2nd Runner-up at Hackniche 2.0 among 300+ teams hosted by DJ Sanghvi College of Engineering.

LEADERSHIP ROLES

• Chairperson, DJS Compute powered by AWS

July 2024 – July 2025

As the Chairperson of DJS Compute, lead consulting initiatives, guiding students through real-world problem-solving in technology and innovation. Mentored students about web development, machine learning, and data engineering, helping them bridge the gap between theory and practical application.