

MEET JAIN

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Education

Indian Institute of Technology, Bombay

July 2026 – 2029

M.Tech, Electronic Systems

CGPA:

Dharmsinh Desai University, Nadiad

September 2022 – May 2026

B.Tech, Electronics and Communication Engineering

CGPA: 9.18/10

Green Valley High School

August 2022

12th CBSE

61%

Prince AshokRaje Gaekwad School

August 2020

10th CBSE

89.8%

Skill Summary

Programming Languages: C, C++, Python, Assembly

Circuit Design & EDA Tools: LTspice, NI Multisim, Altium Designer, KiCad

Embedded Systems: ATmega, STM32, ESP32, Atmel Studio, STM32Cube IDE, ESP-IDF, OpenCV, Raspberry Pi, Linux

Experience

Physical Research Laboratory

Ahmedabad, India

Academic Project Trainee

December 2025 – May 2026

- Designed a Martian UV photometer head detecting 0.1nA fluctuations on a 700μA baseline for ozone sensing on surface.
- Developed signal conditioning unit, integrating 24-bit ADC/DAC stages for high-fidelity data acquisition and processing.
- Tech Stack:** Analog Circuit Design, LTspice, C, ATmega32A, Atmel Studio, Python, Altium Designer, ADC, DAQ, DAC

Marshee Pet Technologies

Remote

Firmware Development Intern

April 2025 – July 2025

- Optimized embedded firmware workflows using scalable, low-power execution algorithms to extend system uptime.
- Refactored modular firmware and integrated secure BLE/Wi-Fi OTA updates with rollback, flash encryption, and BLE.
- Tech Stack:** C, C++, ESP-IDF, ESP32-S3, FreeRTOS, NimBLE, QMI8658, AXP2101, Hardware Development

Projects

BFMC | Bosch Future Mobility Challenge

Dec 2025 – Feb 2026

- Engineered scale-model autonomous vehicles with traffic-aware navigation, obstacle detection, and intelligent control.
- Tech Stack:** STM32, OpenCV, Python, Raspberry Pi 5, US-100, BNO, Encoder

SUB-EX | Submarine Explorer

Aug 2024 – Nov 2025

- Built an underwater ROV achieving 92% crack-detection accuracy using vision and LiDAR fusion in low-visibility.
- Tech Stack:** OpenCV, Python, Raspberry Pi 4, Pixhawk 2.4.8, MAVLink, ESP32, ArduSub

ANAV | Autonomous Aerial Vehicle

Feb 2025 – Jun 2025

- Engineered an autonomous UAV navigation stack using ORB-SLAM3 for localization in martian terrain simulations.
- Tech Stack:** OpenCV, Raspberry Pi 5, Pixhawk, MAVLink, IMU, ORB-SLAM3, Intel D435i, QGroundControl

X-CAM | Self-Charging UAV

Nov 2023 – Sep 2024

- Developed a waypoint-based autonomous UAV with a custom inductive charging dock for uninterrupted missions.
- Tech Stack:** Arduino, APM 2.8, Battery Management System, MissionPlanner, GPS

Extra-Curricular Activities

Spectrum - Electronics and Robotics Club

Onsite

Presentation Head

January 2024 – August 2025

- Mentored 10+ team members in technical presentations and public speaking, improving overall delivery quality.
- Organized and led 10+ technical workshops for 50–80 students, boosting club membership by 40%.
- Soft Skills:** Public speaking, leadership, team management, and visual content creation.

Achievements & Recognition

- GATE ECE 2026:** Score 609, All India Rank 1886 (Marks: 47.67/100)
- Patents Filed:** SUB-EX (202521084199, 2025), X-CAM (202421070313, 2024)
- SSIP Funded Projects (Govt. of Gujarat):** SUB-EX (2024), X-CAM (2023)
- Research Manuscript Submitted:** “Autonomous Navigation and Safe Landing of an Aerial Vehicle in GPS-Denied Martian Environments” – under review at *Journal of Field Robotics Wiley*, 2025