



Lochan Patil

Roll No.: 2311301258

Bachelor of Technology

Electrical

Maulana Azad National Institute of Technology, Bhopal

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GitHub Profile

LinkedIn Profile

PROJECTS

•Data Warehouse Project to consolidate Sales, Customers and Inventory data

- Designed a star schema with fact and dimension tables to support multi-dimensional analytics.
- Wrote complex SQL queries to extract, clean, and transform raw data from flat files and Excel sources.

•Ionic thruster

- Designed and developed a functional ionic thruster prototype for small satellite propulsion, integrating a high-voltage SMPS with a buck converter for efficient ion acceleration. Conducted testing under low-pressure conditions to evaluate thrust and power efficiency.

•Air Quality Monitoring System

- Developed an Air Quality Index (AQI) monitoring system using Arduino Uno and MQ-series gas sensors to detect pollutants like CO, NO, and PM2.5. Displayed real-time AQI data on an LCD and transmitted it via serial communication for analysis.

•Footstep-Based Energy Harvesting Using Piezoelectric Materials for Battery Charging in Wearable Devices

- Designed an energy harvesting system by embedding piezoelectric materials in a shoe sole to generate electricity from walking motion. Captured and regulated the output using a rectifier and capacitor circuit to charge small batteries for low-power wearable devices..

•Swarm Drone Project

- Assisted in assembling and configuring multiple drones for a swarm coordination project. Worked closely with the hardware team to integrate components such as motors, ESCs, flight controllers, GPS modules, and batteries. Supported wiring, soldering, and initial flight testing under team supervision. Ensured proper calibration and contributed to hardware troubleshooting during the setup phase.

TECHNICAL SKILLS AND INTERESTS

Programming Languages: C/C++, Python

Database: SQL

IOT Development: Arduino UNO

Design Tools: CAD Software (AutoCAD/related tools)

Areas of Interest: Photography, Videography

EDUCATION

Maulana Azad National Institute of Technology, Bhopal

2023 – Present

B.Tech in Electrical Engineering | CGPA: 7.27

Garima Vidya Vihar School

2022

Class XII – 85.2%

Class X – 74.6%

EXPERIENCE

•Evolve (EV Tech Society, MANIT)

April 2024 - Present

•NCC, MANIT)

Aug 2023 - Present

POSITIONS OF RESPONSIBILITY

–An NCC Cadet.

–Organized and Mentored Workshop on EV modelling and Vehicle design.

–Organized a case Study Competition in Annual Tech fest of NIT BhopalTechnoSearch in association with Karagre Robotics

–As a key member of Team Evolve, I have successfully secured sponsorship from Karagre Robotics, demonstrating my ability to lead outreach efforts and build strategic partnerships to support the Team

CERTIFICATION & ACHIEVEMENTS

•GenAI Powered Data Analytics Job Simulation

•Arduino IDE workshop

•Rocket Dynamics workshop