

# Pranav Pandey

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Goa , India

## EXPERIENCE

### • MedRide

Jun 2025 - Present

Founder

Goa

- Founded MedRide , a healthcare mobility startup (“Uber for Ambulances”) offering B2B SaaS solutions for hospitals B2C instant and ambulance booking for patients.
- Smart triage model Designed a to route patients directly to the right hospital, reducing fatalities caused by inter-hospital referrals.
- LLM + IoT integration smart hospital partnerships Leading the development of to create , enabling real-time decision support and improved emergency response.

### • DRDO , Cfees

DEC 2024 - Jan 2025

Research Intern

Delhi

- Built and optimised an XGBoost machine learning model in python , achieving 91% accuracy in predictin DDT susceptibility of propellants.
- Applied ML driven insights to propose preventive strategies for Indian Army use cases integrating predictive analytics into combustion safety frameworks.

### • Indian Red Cross

May 2024 - Jul 2024

Web Developer

Dehradun

- Developed and deployed the official Red Cross Dehradun website using HTML, CSS, JavaScript, and React using , along with a staff management platform to streamline operations and outreach.
- Implemented backend integration (Node.js) for all staff coordination , event scheduling and real time relief dispatch tracking.

## EDUCATION

### • BITS Pilani K K Birla Goa Campus

2022 - Present

M.Sc. (Hons.), Chemistry and B.E(Hons.) Chemical Engineering, 2027

Goa , India

## PROJECT

### • LLM-Augmented IoT System for Real-Time Smart Health — Artificial Intelligence

Jul 2025 – Present

- Designed an IoT-based health monitoring system integrating Raspberry Pi/Arduino sensors with LLM-driven analytics.
- Built a cloud-enabled anomaly detection and telemedicine dashboard using Python (Scikit-learn, Pandas) and Firebase/IoT Hub.

### • Quantifiable Hallucination Index (QHI) for Medical AI Models

Aug 2025 – Present

- Proposed a universal metric  $QHI = Confidence \times Risk \times Causal\ Violation\ Score$  to quantify AI hallucination severity.
- Established standardized hallucination benchmarks and measurable safety standards for clinical AI deployment.

### • SurferBot 2.0 — Micro-Robotics Research, BITS Goa

Aug 2025 – Present

- Designed a phase-aware microrobot using dual-motor vector thrust control synchronized with surface wave dynamics.
- Built solar-supercapacitor modules enabling 4–8 hr runtime and validated hydrodynamic efficiency experimentally.

### • Eye — AI Wearable for the Visually Impaired

Mar 2025 – Jun 2025

- Built real-time obstacle detection using Intel RealSense and YOLO object detection for navigation assistance.
- Integrated LLM-based voice guidance for autonomous mobility in dynamic environments.

### • Research Project — Therapeutics Based on Lysine Modified Small HSPs

Oct 2023 – Dec 2023

- Investigated lysine-modified small heat shock proteins (sHSPs) for improved therapeutic stability in cancer models.
- Explored protein modification strategies to enhance treatment outcomes in cancer and neurodegenerative diseases.