

Aayush Bindal

+91 ***** | aayushbindal01@gmail.com | [Portfolio](#) | [Linkedin](#) | [Github](#) | Patiala, Punjab, India

LEADERSHIP & EXPERIENCE

Enactus Thapar

Sept 2024 – Present

Head of Research & Development

Patiala, India

- Spearheaded R&D for Project Aarohan, converting PET bottle waste into premium 3D printer filament and achieving a 95% prototype diameter consistency rate.
- Architected and deployed the organization's official [web](#) platform using React.js, optimizing SEO to boost digital traffic by over 40%.

Team Oorja (GKDC)

Nov 2024 – Present

DAQ Department Engineer

Patiala, India

- Led data acquisition (DAQ) integration for GKDC Season 13, validating vehicle electronics and telemetry systems.
- Programmed a digital twin and DAQ framework utilizing Simulink and C++ (Teensy/ESP32) to monitor 10+ critical parameters at 100Hz.
- Designed multi-layer PCBs for sensor signal conditioning and orchestrated a Python/LoRa RF telemetry dashboard, reducing data latency by 35%.

PROJECTS

DragVerse – Edge AI Robotics Platform | *Unity, Splatting, RL* | [GitHub](#)

Jul 2026

- Engineered an edge AI robotics platform utilizing Gaussian Splatting and Homography for real-world environment capture and digital twin generation.
- Trained a reinforcement learning navigation model across 50+ iterations, leveraging Qualcomm AI Hub for optimized on-device inference via the Snapdragon NPU.
- Deployed Sim2Real Unity simulations to physical hardware, achieving fully offline autonomous navigation on Arduino Uno Q setups.

NutriAI – AI Powered Nutrition Tracker | *React Native, Expo, Gemini API* | [GitHub](#)

Feb 2026 – Apr 2026

- Developed a cross-platform health application for 50+ users, integrating a multimodal LLM and camera recognition to decrease manual meal logging time by 85%.
- Architected a local-first SQLite data layer with encrypted JSON backups to eliminate cloud dependencies and ensure 100% user data privacy.
- Designed interactive UI elements via React Native Reanimated for macro tracking, animated calorie rings, and weight progression visualization.

JanMitra – Multilingual Voice AI Agent | *LiveKit, Sarvam AI, RAG* | [Website](#)

Jan 2026

- Constructed a voice-driven AI agent granting rural citizens access to financial literacy, government schemes, and grievance services via natural conversation.
- Engineered a real-time speech pipeline integrating LiveKit, Sarvam AI, and semantic search for accurate, dialect-aware RAG responses and human escalation.
- Structured an offline-ready, low-bandwidth architecture projected to serve 330M+ users nationwide via toll-free telephony networks.

EDUCATION

Thapar Institute of Engineering and Technology

Aug 2024 – Jun 2028 (Expected)

Bachelor of Engineering

Patiala, Punjab

- **CGPA:** 8.66 / 10
- **Coursework:** Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Computer Networks, DBMS, Machine Learning

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C/C++, R

Mobile & Web: React, React Native, Next.js (SSR/SSG), Expo, Tailwind CSS

Backend & Data: Node.js, Express.js, FastAPI, PostgreSQL, MongoDB, SQLite, Redis, WebSockets

Data Science: NumPy, Pandas, Scikit-learn, Matplotlib, PyTorch

Engineering: MATLAB, Simulink, OpenCV, Embedded Systems (Teensy/ESP32), Arduino, IoT

Infrastructure: Docker, Linux (Bash), Git, AWS, GCP, CI/CD

HONORS & AWARDS

1st Place – Qualcomm Snapdragon Multiverse AI Hackathon | [Website](#)

Jul 2026

2nd Place (Intl.) – SabkaAI Impact Summit | [Deployment](#)

Jan 2026

2nd Place Overall & 1st in Innovation – GKDC Season 13 | [Repository](#)

Feb 2026

1st Place – IEEE BIOS Hackathon SafeMode Track | [Demo](#)

Nov 2025