

PRANJAL PRAKASH

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EDUCATION

Master of Computer Application , Reva University <i>2nd Semester - 8.47/10 CGPA</i>	Expected 2026
Bachelor of Science , Integral University <i>Specialization in Physics, Maths & Computer Science 7.6 CGPA</i>	2021 - 2024
XII (Senior Secondary) , KV IIM Lucknow <i>PCM: 88.8%</i>	2019
X (Secondary) , KV No. 1, Devlali <i>Score: 10 CGPA</i>	2017

SKILLS

Programming	Python, C++
Core CS	Data Structures, Computer Network , Operating systems
Backend Development	FastAPI, REST APIs, SQLAlchemy, PostgreSQL, Git/Github, W&B
Databases	PostgreSQL
Machine Learning	PyTorch, Scikit-learn, NLP, openCV , Computer Vision, Hugging face , AI agents
Tools & Platforms	AWS (EC2, S3), Linux, Postman, GitHub Actions (CI/CD)
Soft Skills	Problem Solving, Communication, Ownership, Team Collaboration

PROJECTS

1. Terrain Safety Analysis & Navigation Assistant (PyTorch, Gradio): Built a computer vision prototype for autonomous navigation using **SegFormer** for 150-class semantic segmentation and **Depth Anything V2** for monocular dep estimation. Engineered a custom safety-score algorithm and **A* pathfinding** logic to visualize optimal traversal routes on a 3D terrain mesh. Implemented geometric refinement via slope and morphology analysis to minimize hazard detection false positives. Integrated **Weights & Biases (W&B)** for real-time performance monitoring and inference logging.

2. Python API Development (FastAPI, SQLAlchemy, PostgreSQL): Designed and implemented a **multi-tiered backend system** using FastAPI and PostgreSQL, following REST architectural principles. Optimized relational queries using **indexing and ORM-level caching**, improving data retrieval by 15%. Built modular **data models and schema validation**, showcasing understanding of object-oriented principles. Integrated **GitHub Actions for CI/CD** and used **pytest** for automated testing to ensure reliability.

CERTIFICATIONS

Machine learning Specialization – Deeplearning.ai	2025 June - Ongoing
Devops Bootcamp - Mevi Technologies	July 21st 2025- 24th July 2025

EXTRA-CURRICULAR ACTIVITIES

- National level winner in National Children Science Congress
- Participated in global hackathon hosted by Hugging Face