

# PRANJAL PRAKASH

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## EDUCATION

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

## SKILLS

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

## PROJECTS

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- 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 depth 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.
- 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

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

## EXTRA-CURRICULAR ACTIVITIES

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