

# Apoorv Raj

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## EDUCATION

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<b>BMS Institute of Technology and Management</b> , Bengaluru	Sep. 2023 - Present
<b>Bachelor of Engineering</b> (Artificial Intelligence & Machine Learning)	Bengaluru, India
CGPA: <b>9.31/10</b> (till 3rd year)	
<b>CLASS XII – D.A.V. Public School Gandhinagar, Ranchi</b> (CBSE)	2021 - 2022
Percentage: <b>92.6%</b>	Ranchi, India
<b>CLASS X – D.A.V. Public School Gandhinagar, Ranchi</b> (CBSE)	2019 - 2020
Percentage: <b>92.6%</b>	Ranchi, India

## EXPERIENCE

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<b>Web Development Intern — Central Coalfields Limited (CCL)</b>	02 August 2025 – 30 August 2025 (4 weeks)
<ul style="list-style-type: none"><li>Designed and developed <b>CONVOA</b>, a full-stack Q&amp;A platform.</li><li>Built responsive UI using <b>HTML, CSS, Bootstrap</b>, ensuring consistent mobile-friendly layout.</li><li>Implemented secure user authentication and CRUD operations using <b>PHP &amp; MySQL</b>.</li><li>Optimized backend SQL queries for better performance and reliable data management.</li></ul>	

## PROJECTS

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### SARTHI — Crowdsourced Public-Safety App

*Python, Flask, scikit-learn, Firebase Auth, JS (ES Modules), joblib, pandas, numpy*

- Built the backend using Flask blueprints with secure Firebase-based authentication.
- Trained and deployed an ML pipeline (scikit-learn) with serialized joblib models for safety-score prediction.
- Implemented geospatial logic: grid-cell encoding, time-decay scoring, and reverse geocoding.
- Developed REST APIs for submitting audits, generating heatmaps, and computing safe routes.
- Integrated frontend communication through authenticated fetch requests and modular JS components.

### CONVOA — Q&A Platform

*HTML, CSS, Bootstrap, PHP, MySQL*

- Built a full-stack Q&A platform with secure authentication and CRUD operations.
- Designed a scalable MySQL schema for users, questions, and answers.
- Developed responsive UI using Bootstrap and optimized backend queries.

## TECHNICAL SKILLS

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**Programming:** Java, C/C++, Python, PHP, HTML, CSS, JavaScript

**Backend & Frameworks:** Flask, Firebase Admin SDK, REST API Design

**Machine Learning & Data:** scikit-learn, pandas, numpy

**Databases:** MySQL, MongoDB

**APIs & Geospatial:** Nominatim API, JSON-based fetch workflows

**Core Areas:** Data Structures & Algorithms, DBMS, Machine Learning (basics)

**Tools:** Git/GitHub, VS Code, XAMPP

## CERTIFICATIONS

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- Machine Learning for Engineering Sciences Applications – NPTEL (2024)**

## LANGUAGES

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- Hindi (Fluent/Native)
- Bengali (Fluent/Native)
- English (Professional Proficiency)