

Apoorv Raj

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EDUCATION

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

EXPERIENCE

Web Development Intern — Central Coalfields Limited (CCL)	<i>02 August 2025 – 30 August 2025 (4 weeks)</i>
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- Designed and developed **CONVOA**, a full-stack Q&A platform.
- Built responsive UI using **HTML, CSS, Bootstrap**, ensuring consistent mobile-friendly layout.
- Implemented secure user authentication and CRUD operations using **PHP & MySQL**.
- Optimized backend SQL queries for better performance and reliable data management.

PROJECTS

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

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

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

LANGUAGES

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