

Aditya Raghuwanshi

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EDUCATION

Institute of Engineering and Technology, DAVV, Indore
B.E. in Computer Engineering

Oct 2022 – May 2026 (Expected)
CGPA: 8/10

Mansarovar Academy
Percentage: 92%

Class 12 (2022)

Vatsalya Sr. Secondary
Percentage: 92.4%

Class 10 (2020)

PROJECTS

Disaster Management and Refugee Camp System

MERN, MongoDB, Node.js, React, Leaflet.js, Graph/DSU

- Designed and deployed a **full-stack application** for real-time management of refugee records, safe zones, and resource allocation during disaster scenarios.
- Applied **graph algorithms and Disjoint Set Union (DSU)** to model safe paths and dynamically cluster refugee camps.
- Developed a responsive **React.js frontend with Leaflet.js maps** to visualize safe places, evacuation routes, and camp distribution.
- Built a secure **RESTful backend using Node.js/Express** integrated with **MongoDB** for data persistence.
- Delivered **real-time insights** for authorities to make data-driven decisions in evacuation planning, resulting in improved efficiency of resource allocation.

Credit Card Fraud Detection using Apache Spark MLlib

PySpark, MLlib, Python, Pandas, Matplotlib

- Built a **fraud detection pipeline** to analyze millions of credit card transactions leveraging distributed computing with Apache Spark.
- Conducted **data preprocessing and feature engineering**, addressing class imbalance with SMOTE/undersampling.
- Implemented and compared multiple **ML models** (Logistic Regression, Random Forest, Gradient Boosting) achieving high prediction accuracy.
- Improved detection rate through **cross-validation and hyperparameter tuning**, evaluated using AUC/ROC metrics.
- Integrated **real-time fraud detection** with Spark Streaming; visualized fraud patterns and anomalies using Matplotlib/Seaborn.
- Delivered a scalable system capable of supporting **financial institutions** in monitoring and preventing fraudulent activity.

KEY COURSES TAKEN

- Data Structures and Algorithms, Operating System, Database Management Systems (DBMS)
- Object-Oriented Programming (OOPS), Computer Architecture, Software Engineering

TECHNICAL SKILLS

- **Languages:** C++, C, Python, JavaScript, HTML, CSS
- **Frontend:** React, Tailwind CSS
- **Backend:** Node.js, Express.js, REST APIs
- **Database:** MySQL, MongoDB
- **Machine Learning / Data:** PySpark, Spark MLlib, Pandas, Matplotlib, Seaborn
- **Tools:** Git, GitHub, Figma, VS Code, Postman

COMPETITIVE PROGRAMMING

- Achieved **1200+ Codeforces rating**, regularly solving algorithmic and problem-solving challenges.
- Solved **1000+ DSA problems** across platforms including LeetCode, Codeforces, and GeeksforGeeks.
- Proficient in applying **Greedy, Dynamic Programming, Graphs, and Advanced Data Structures**.

ACHIEVEMENTS

- Qualified for **Round 2 of Smart India Hackathon 2024**.
- Designed and built **Khet-e**, a full-stack application for digitizing agricultural contracts between farmers and traders.
- Selected as a coordinator at **FeedBox Club**, organizing coding events and mentoring juniors.