

# SANDEEP BALABANTARAY

Madhya Pradesh, India

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## Education

### VIT Bhopal University

CGPA : 8.54

Bachelor's in Computer Science and Engineering (B.Tech)

2022 – to be 2026

## Technical Skills

**Programming Languages:** Python, C++, Java, JavaScript, SQL (MySQL, PostgreSQL), MATLAB, HTML, CSS  
**Machine Learning:** Scikit-Learn, Feature Engineering, Model Evaluation, Sentiment Analysis, Generative AI (GenAI), Hugging Face Transformers  
**Deep Learning Frameworks:** TensorFlow, Keras, PyTorch, Computer Vision, NLP, OpenCV, NLTK, CUDA  
**Web Development:** React.js, Flask, Django, Tailwind CSS, REST APIs  
**Databases & Backend:** : MySQL, MongoDB, Database Management Systems (DBMS)  
**Data Science & Analytics:** NumPy, Pandas, Matplotlib, Seaborn, Data Wrangling, Statistical Analysis  
**Development & Tools:** :Git, Docker, CUDA, Linux, Jupyter Notebook, VS Code  
**Software Engineering:** Object-Oriented Programming (OOP), Data Structures & Algorithms (DSA), Design Patterns

## Experience

### Madhya Pradesh Police

Dec 2024 – March 2025

Frontend Web Developer & Database Manager Intern

Bhopal, Madhya Pradesh

- Led the digitalization of police forms, transforming 50+ manual records into a web-based system using React and Flask, reducing paperwork by 70% and improving accessibility.
- Officers can now easily enter data thanks to an easy frontend interface that cuts down on form processing time by 50%.
- Designed and managed the database, enabling automatic extraction of 1,000+ form entries into Excel format, cutting data retrieval time by 60% and streamlining record-keeping.

### Teachnook(Teachscape)

Oct 2023 –Dec 2024

AI Engineer Intern

Remote

- Utilizing Python, Scikit-Learn, and TensorFlow, predictive models were created and refined, increasing model accuracy by 20% over several projects.
- Implemented data preprocessing pipelines and automated feature engineering, enhancing model performance and reducing training time by 30%.

## Projects : <https://github.com/AxilBlaze>

### SkillCraft | ReactJS, Flask, HuggingFace Transformers, GenAI

<https://course-craft-front.vercel.app/>

- Optimized Flask-based API performance, reducing response time by 40% through efficient model inference and caching.
- Implemented adaptive learning algorithms that dynamically updated learning paths based on user progress, improving course recommendation accuracy by 5%.
- Created a multimodal chatbot with 99% accuracy in comprehending and reacting to human input.

### Course Finder| HTML, CSS, JS, Machine Learning, Flask, NLTK

<https://coursecom.onrender.com/>

- Course recommendation utilizing Singular Value Decomposition (SVD) to analyze user preferences and course attributes
- This platform predicts suitable courses for each individual, providing a personalized and efficient learning experience.
- Engineered a sentiment analysis mechanism that processed over 2,000 course evaluations, yielding valuable insights into student satisfaction, ultimately guiding curriculum adjustments and enhancing the overall educational experience.

### Medipred | Machine Learning, Flask

<https://www.youtube.com/watch?v=QjwWLSOTGDc>

- Retrieved datasets from multiple online sources, then cleaned and preprocessed 10M+ records, including handling missing values, outliers, and normalization, enhancing ML model performance by 25%.
- Developed and deployed ML models for the MediPred platform, achieving 90%+ accuracy in predicting heart disease, COVID-19, cancer, diabetes, and vector-borne illnesses across 5,000+ records per dataset.

## Achievements

- **Smart India Hackathon :** Qualified all three internal rounds, ranking among the top out of 200+ participating teams.
- **NPTEL Swayam: Cloud Computing :** Successfully completed the course in the Elite Category, ranking in the top X% among 23,872 applicants.
- **Coursera :** Stanford University & DeepLearning.AI Machine Learning Specialization.
- **Coursera :** Google Certification in Bits and Bytes of Computer Networking
- **Coding Aptitude :** Solved more than 200 questions on LeetCode, GFG and other platforms.