Aakash Sharma

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Portfolio: Link

Passionate and results-driven developer with strong skills in Python, Machine Learning, and full-stack development. Experienced in building end-to-end solutions from data processing and model development to deployment and user interfaces. Eager to contribute technical strengths and creative problem solving to a startup environment.

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY, MADRAS — **2024 - 2028**
B.S. in Data Science
CGPA - 7.22 / 10

JABALPUR ENGINEERING COLLEGE, JABALPUR — **2023 - 2027**
B.Tech in Computer Science and Engineering
CGPA - 7.68 / 10

SETH GURU PRASAD AGRAWAL H.S. SCHOOL, NARMADAPURAM
12th Percentage - 90.7% — **2021 - 2022**
10th Percentage - 97% — **2019 - 2020**

PROFESSIONAL EXPERIENCE

GSSOC 2K25 — **Aug 2025 - Oct 2025**
Open Source Contributor
• Contributed to open-source projects focused on AIML, LLM and web development.
• Implemented new features and fixed bugs in collaboration with global developer community.
Tech Knowledge: React.js, Flask, LLM, API handling

INNOVATE BY HEXAIND INFOTECH PVT. LTD. — **Sept 2024 - Dec 2024**
AIML Trainee
• Implemented machine learning models using Python, Scikit-learn, and TensorFlow to solve real-world problems
• Developed object detection using YOLOv5, Mask R-CNN and TensorFlow
Tech Knowledge: Machine Learning Algorithms, Deep Learning Neural Networks.

YBI FOUNDATIONS — **Aug 2024 - Sept 2024**
Data Analysis Trainee
• Analyzed large datasets using Python, Pandas, Polars and NumPy to extract actionable insights
• Created interactive data visualizations with Matplotlib and Seaborn to communicate findings to stakeholders
Tech Knowledge: Data Cleaning, Data Augmentation, Data Visualization.

SKILLS

Language: Python, C++, Java
Frontend: HTML,CSS, JavaScript, Vue.js, React.js
Backend: Flask, Express.js
Database: PostgreSQL, MongoDB, Firebase
Data Analysis: Numpy, Pandas, Polars, Matplotlib, Seaborn
Data Science: Scikit-learn, Tensorflow, Langchain, HuggingFaceHub, AI integration
Core Knowledge: Operating System, DSA, DBMS, System Commands, OOPS.

MAJOR PROJECTS

Vehicle Parking App

Vehicle Parking App v2.0 is an advanced parking management system that leverages real-time data analytics to optimize parking space utilization. Built with Python and Flask for the backend, and Vue.js for the frontend.

- Admin dashboard with real-time parking analysis.
- Admin can add/remove parking lots and their slots dynamically
- User authentication and role-based access control
- User can book parking slots in advance
- Admin can monitor parking lot occupancy in real-time

Technologies Used: Python, Flask, Vue.js, Socket.io, PostgreSQL, Chart.js

Nanoparticle structure prediction

By leveraging artificial neural network and large datasets of known nanoparticle structures with four features (Atomic number, Atomic radius, Electronegativity, and Melting Point), the model aims to accurately predict the arrangement of atoms within nanoparticles. The project is implemented using Python, TensorFlow, and Keras, and includes data preprocessing, model training, and evaluation.

- Feature Used - 4
- Accuracy achieved - 88%
- Research paper presented at ICNMA 2k25
- Model training and hyperparameter tuning
- Model evaluation using accuracy metrics

Technologies Used: Python, sklearn, TensorFlow, Keras, Pandas, NumPy, Matplotlib, Jupyter Notebook

Object Detection using Mask R-CNN

This project implements object detection and segmentation using the Mask R-CNN algorithm. By leveraging deep learning techniques, the model is capable of identifying and segmenting multiple objects within images. The project is built using Python, TensorFlow, and Keras, and includes data preprocessing, model training, and evaluation.

- Data preprocessing and augmentation
- Mask R-CNN model architecture design
- Model training and hyperparameter tuning
- Visualization of detected and segmented objects

Technologies Used: Python, TensorFlow, Keras, Pandas, NumPy, Matplotlib, Jupyter Notebook

Check my Portfolio and GitHub to check my other major and minor projects.

ACHIEVEMENTS AND OTHER ACTIVITIES

Research Paper

Participated in INTERNATIONAL CONFERENCE OF NANOPARTICLES AND MATERIAL SCIENCE (ICNMA2k25) and Presented my research work on "Predicting Structure of Nanoparticles Using Deep Learning."

College Club Activity

Founding member and Technical head of "COSMOS: Science and Tech" Community of Jabalpur Engineering College.
Organnised TechBlitz and Cosmic tech talk events at Jabalpur Engineering College

GSSOC Activity

Completed Postman API Student Experts Course associated with GSSOC 2025