Falak Rana

Vadodara, India | ranafalak18@gmail.com | 9725556991 | falakrana.vercel.app | Falak Rana | falakrana

Welcome to my CV!

Machine learning enthusiast skilled in neural networks, generative AI (LangChain, Ollama), and frameworks like TensorFlow and PyTorch. Experienced in NLP, computer vision, and model optimization.
Proficient with SQL, MongoDB, and data visualization tools like Tableau and Matplotlib. Strong in DSA for building efficient, scalable solutions.

Education

B.Tech **Parul University**, Computer Science and Engineering — 2022 – 2026

- GPA: 8.3/10.0

HSC **Green Valley High School** — 2022

- Score: 91.80%

Experience

UnifiedMentor, Machine Learning Intern — Remote, Jan 2025 – Apr 2025

- Completed 6 ML projects involving data preprocessing and model development.
- Applied supervised/unsupervised learning using TensorFlow, Scikit-learn, and Flask.
- Worked with neural networks and gained practical deep learning experience.
- Projects documented on GitHub: github.com/falakrana/unifiedmentor

Projects

Disease Prediction using ML

- Machine learning application that predicts the probability of disease based on symptoms.
- Built with React (frontend) and Flask (backend) for seamless user interaction.

GitHub: github.com/falakrana/Disease-Prediction-using-ML

Virtual Mouse using Eyes

- Python-based system that enables cursor movement and click actions using eye movements and blinking.
- Technologies used: OpenCV, MediaPipe, PyAutoGUI.

GitHub: github.com/falakrana/virtualMouseDetectionUsingEyes

Vehicle Price Prediction

- Machine learning-powered app to predict vehicle resale prices based on various factors.
- Complete application with frontend, backend, and MongoDB integration.

GitHub: github.com/falakrana/Vehicle-Price-Prediction

Data Analysis and Visualization

- Projects using Python, Tableau, and Excel to analyze and visualize real-world datasets.
- Focus on extracting insights, statistical analysis, and creating interactive dashboards.

GitHub: github.com/falakrana/Data-Analysis-Visualization

Technologies

Languages: Python, SQL, Java, HTML, CSS, JavaScript

Data & Machine Learning Tools: Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, PyTorch, Deep Learning

AI & LLM Tools: LangChain, Ollama, Hugging Face, Embeddings, Vector Databases (FAISS, ChromaDB), API handling, Transformers

Databases: SQL, MongoDB

Visualization: Tableau, Power BI, Microsoft Excel

Libraries & Frameworks: Beautiful Soup, Flask, Django, Node.js, Express.js, React, Bootstrap, Tailwind

Version Control: Git, GitHub

Others: Data Structures & Algorithms (DSA)

Research Work

Nov 2024 – Ongoing Gesture Recognition System – *SignScripting* Researched gesture recognition using CNN and real-time hand tracking via MediaPipe to support non-verbal communication for speech- and hearing-impaired individuals.

References:

- Pigou et al. (2018), *ECCV* – CNNs for sign language recognition
- Zhang et al. (2020), *arXiv:2006.10214* – MediaPipe Hands

Feb 2025 CUDA Integration with TensorFlow Studied compatibility of CUDA 11.8 with TensorFlow 2.10 and PyTorch for GPU-accelerated model training.

References:

- NVIDIA Docs: `https://docs.nvidia.com/cuda/`
- A. Kumar & A. Khanna: `https://link.springer.com/chapter/10.1007/978-981-10-8527-7_34`

Certification

- **Data Science Bootcamp** – Udemy Certificate
- **Data Visualization with Tableau** – Udemy Certificate
- **MySQL** – Cursa Certificate
- **Excel** – Coursera Certificate