Manan Kher

7977682332 | manan.kher22@spit.ac.in | Mumbai, Maharashtra
linkedin.com/in/manankher | github.com/macaronimutton | kaggle.com/macaronimutton

Summary

I am a 3rd-year Computer Engineering student with a CGPA of 9.99, passionate about Data Science, Machine Learning, and backend development. I have hands-on experience with EDA, supervised and unsupervised learning, and advanced deep learning techniques such as ANN, CNN, and LSTM. I've worked on real-world tasks in computer vision, NLP, and transformer models. Notable projects include a deepfake detector using TensorFlow and a fashion recommender system built with Django. I am seeking opportunities to apply my skills in a Data Science or Machine Learning internship.

Education

Sardar Patel Institute of Technology — Mumbai, India
B.Tech in Computer Engineering, CGPA: 9.99 — *Aug 2022 – Present*

SPJIMR SP Jain Institute of Management and Research — Mumbai, India
Minor in Management — *Feb 2024 – Present*

Alpha College — Mumbai, India
11th and 12th Standard, Grade: 97.5%, MHT-CET: 100%ile, JEE Mains: 99.53%ile — *2020 – 2022*

Orion ICSE School — Mumbai, India
10th Boards: 98.2% — *2007 – 2020*

Projects

Conversational RAG Bot | *Langchain, HuggingFace, Groq API, Ollama, FAISS* 2024

- Built a conversational RAG bot with message history using Langchain, Hugging Face embeddings, and LLMs from Groq API and Ollama.
- Utilized FAISS vector store to store embeddings of document chunks, enabling efficient similarity search to retrieve relevant context.
- Passed retrieved context as a prompt to the LLM model along with user input, enhancing the bot's conversational relevance and accuracy.

OCR for Product Dimension Extraction (Amazon ML Hackathon) | *IDEFICS, EasyOCR* 2024

- Used IDEFICS multimodal model along with OCR to perform Visual Question Answering (VQA) for extracting product dimensions such as weight, height, and width from images of Amazon products.
- Implemented and fine-tuned OCR models (Pytesseract, EasyOCR, KerasOCR) to enhance accuracy in reading and processing product dimensions.
- Developed an efficient solution to extract precise dimensional data from product images for e-commerce applications.

Deepfake Detector | *TensorFlow, PyTorch, Random Forest* 2023

- Developed a deepfake detection model using TensorFlow's MoveNet, PyTorch's DenseNet16, and Random Forest for audio detection.
- Achieved 85-90% accuracy in detecting deepfake videos by integrating video and audio components.

Fashion Recommender System (SE Hackathon Top 12) | *ResNet, Collaborative Filtering, Django* 2023

- Developed a fashion recommender system using ResNet and collaborative filtering.
- Integrated Gemini API for real-time image comparison.

Plane Crash Search using Bayesian Search Theory | *Django, LeafletJS, Bayesian Theory* 2024

- Built a plane crash search simulation using Bayesian Search Theory, A* Search Algorithm, and Kernel Density Estimation. The optimal search path can be exported in CSV format for use by rescue teams.
- Integrated Django backend, LeafletJS for geospatial visualization, Selenium for automated data retrieval, and Meteomatics API to access wind and ocean wave velocities for algorithmically backtracking recovered debris.
- Converted gathered geographic and flight data into meaningful probability distributions, and performed visualisation with Seaborn and Matplotlib to provide insights to the Search and Rescue Team.

Technical Skills

Languages: Python, C, C++, Java
Databases: MySQL, MongoDB
Web Technologies: HTML, CSS, Django, Flask
ML Frameworks: HuggingFace, Langchain, Scikit-learn, Tensorflow, Keras, NLTK, OpenCV
Python Libraries: Numpy, Pandas, Matplotlib, Seaborn, Plotly, Pygame, Selenium
Tools: Git, GitHub, Postman
ML Techniques: NLP, OCR, RAG Pipelines, BERT Fine-tuning, EDA & preprocessing, Transfer Learning, Computer Vision
APIs: Gemini API, Groq API, Ollama

Certifications

Generative AI with Langchain and Hugging Face	Udemy, Ongoing
Django Masterclass: Build 9 Real World Django Projects	Udemy
Python for Data Science and Machine Learning Bootcamp	Udemy
Pandas	Kaggle
NPTEL: Soft Skills and Personality Development	Top 1% National Topper

Achievements

Top 12 Placement — SE Hackathon for Fashion Recommender System

Participation - Aeravat AI Hackathon (Cybersecurity & AI)

1st Position — F.Y. BTech Computer Engineering at Sardar Patel Institute of Technology

MHT-CET Topper - 100%ile in MHT-CET 2022