Diwan Singh Chauhan

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Objective

To work in a dynamic and innovative tech environment where I can apply my skills in Python programming, data science, machine learning, deep learning, NLP and computer vision. I aim to contribute to real-time AI solutions by developing and deploying models using frameworks like TensorFlow and PyTorch. I am eager to work on end-to-end ML pipelines, model optimization and domain-specific applications such as object detection, face recognition and predictive maintenance.

Skills Summary

- **Data Science:** Python, Machine Learning Algorithms, Data Analysis, Data Visualization, NumPy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Statistics, Analytics, Streamlit, TensorFlow, Keras, PyTorch, CNN, RNN, LSTM, Transfer Learning, Deep Learning, Natural Language Processing, Hugging Face, Generative AI, Transformers, LangChain, Computer Vision, OpenCV, Machine Learning, AI, ML
- **Soft Skills:** Collaborator, Planner, Problem Solver, Analytical Thinking, Multi-tasker, Adaptable, Strong Verbal & Written Communication

Internship

- **Machine Learning Intern CERTIFICATE**

  LogicLens Solutions Private Limited | *07/2024 – 12/2024*
  - Designed and implemented real-time computer vision systems for facial recognition, object detection and video analytics using YOLO and FaceNet models.
  - Developed and optimized deep learning models with TensorFlow, PyTorch and OpenCV.
  - Collaborated with cross-functional teams to integrate AI models into real-world applications.
  - Gained hands-on experience in video analytics and real-time surveillance systems.

Projects

- **RAG Document Q&A With Groq and Llama4 Link**
  - Built a Q&A app that answers questions from uploaded PDFs using Groq's LLaMA-4 model and LangChain.
  - Used Hugging Face to create text embeddings and stored them in FAISS for fast search.
  - Made a simple Streamlit interface for users to upload files and ask questions.
- **LangChain based Chatbot using Ollama's Mistral model LINK**
  - Uses essential building blocks: PromptTemplate, LLM and StrOutputParser for clean and maintainable pipelines.
  - Run powerful open-source LLMs like Mistral completely offline using Ollama.
  - Visualize and debug each step of your LangChain flow using LangSmith's developer-friendly dashboard.
- **Next Word Prediction Using LSTM Link**
  - Used the WikiText-2 dataset, a curated collection of high quality Wikipedia articles.
  - Text data is tokenized, converted into sequences and padded to ensure uniform input lengths.
  - LSTM model is constructed with an embedding layer, two LSTM layers and a dense output layer with a softmax activation function.
  - Model is trained using the prepared sequences, with early stopping implemented to prevent overfitting.
- **IMDB Movie Review Sentiment Analysis Link**
  - Built a sentiment analysis model to classify IMDB movie reviews as Positive or Negative.
  - Used text preprocessing, word embeddings and a Simple RNN based architecture.
  - Trained the model using binary cross-entropy loss with accuracy optimization.
  - Deployed the model via a Streamlit web app for real time user interaction.

- **Creating Automatic GIFs from Videos Link**
  - This project automates the process of creating GIFs from video files.
  - It extracts audio, detects silences, transcribes them, and generates high-quality GIFs with text overlays.
  - Powered by Python with libraries like moviepy, pydub, and Whisper for transcription, it simplifies the creation of engaging GIFs from your video content.
  - Perfect for social media, tutorials, and presentations
- **Book Recommender System Link**
  - This is a machine learning project built using python and flask app.
  - It uses collaborative filtering and popularity-based filtering techniques to provide personalized movie recommendations.
  - The system is deployed on Render, making it easily accessible via a web interface.Users can explore and discover movies based on their preferences and past ratings.

Certifications

- Python Core Programming Course (05/2023 - 07/2023) CERTIFICATE
- Expert in Machine Learning & Data Analysis (07/2023 - 12/2023 CERTIFICATE

Academic Credentials

- **M.Tech. (Data Science)**
  Defence Institute of Advanced Technology, Pune (2023-2025) with 7.90 CGPA
- **M.Tech. (Metallurgical and Materials Engineering)**
  IIT ROORKEE (2014-2016) with 7.088 CGPA.
- **B.Tech. (Mechanical Engineering)**
  Galgotias College of Engineering & Technology (2009-2013), Secured 72.74% marks

Personal Details

- **Linguistic Abilities:** English, Hindi
- **Nationality**: Indian