

Diwan Singh Chauhan

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[GitHub](https://github.com/diwansinghchauhan) :- github.com/diwansinghchauhan

[Portfolio](https://diwansinghchauhan.github.io/portfolio/) :- diwansinghchauhan.github.io/portfolio/

***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](https://diwansinghchauhan.github.io/portfolio/images/LogicLens.png)

*LogicLens Solutions Private Limited* l *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](https://github.com/diwansinghchauhan/RAG-Document-Q-A-with-Groq-and-LLaMA-4)

* + 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](https://github.com/diwansinghchauhan/LangChain-based-chatbot-using-Ollama-Mistral-model?tab=readme-ov-file)

* + 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](https://github.com/diwansinghchauhan/Next-Word-Prediction-Using-LSTM)

* + 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](https://github.com/diwansinghchauhan/IMDB-Review-Sentiment-Analysis)

* + 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](https://github.com/diwansinghchauhan/Creating-Automatic-GIFs-from-Videos)

* + 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](https://github.com/diwansinghchauhan/Book-recommender-System)

* + 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](https://digistackedu.com/certificate/DSE1230043-Diwan-Singh.pdf)
* Expert in Machine Learning & Data Analysis (07/2023 - 12/2023 [CERTIFICATE](https://digistackedu.com/certificate/DSE1230059-Diwan-Singh.pdf)

***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