# **Diwas Shrestha**

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## **Profile**

I am a Msc Applied Data Science student and previously worked as a Machine Learning Engineer with experience in training and deploying machine learning models and developing AI solutions. My main experience lies working with Large Language Models, transformer based embedding models, and development with frameworks such as LangChain.

I describe myself as a curious knowledge driven person and am in constant pursuit of learning new things. I'm a quick learner and a hard-working person, and diligently accomplish my tasks. I also have great communication skills and a proven ability to collaborate effectively in diverse team environments.

## Experience

2023/08 - 2024/07

### **Machine Learning Engineer**

**Fusemachines** 

- Worked on RAG (Retrieval Augumented Generation) based report generation tool that generates tabular reports of companies based on scraped data using OpenAI, LangChain, FAISS, and FastAPI.
- Developed a RAG based document question answering system.
  - Tech Stack: OpenAI, open source embedding model, Weaviate vector database.

2023/04 - 2023/07

#### **Artificial Intelligence Intern**

Kathmandu, Nepal

**Fusemachines** 

- Studied Generative models from Auto Encoders to GANs.
- Learned the PyTorch Fundamentals, data loaders, and PyTorch pipeline.

2017/06 - 2018/04

**Teacher** 

Naikap, Kathmandu, Nepal

Golden Flower Garden School

- Taught computer science to students of secondary level.
- Held lab sessions for the hands on experience with software as Paint, Word, Excel.

### **Projects**

#### **Ecosystem**

- Developed a system to generate tabular reports of companies about different fields using scraped data.
- Utilizes RAG architecture and Prompt engineering to output the answers in a csv format.
- Technologies used: Langchain, OpenAI, FAISS vectorstore, PostgreSQL, FastAPI.

#### **Frost-GPT**

- Document based question answering system using RAG architecture.
- Developed a chatbot to answer questions about the documents that are uploaded. The chatbot answers questions based on uploaded documents and provides the sources.
- Technologies used: OpenAI, UAE-Large-V1 Embedding model, Langchain, Weaviate Vector database, FastAPI, MongoDB.

#### Feature Selection for Binary Classification

- This was an Academic project studying the processes of feature selection for binary classification, classifying breast cancers.
- For comparing different sets of features against their efficiency and accuracy many Artificial Neural Networks (ANNs) were built

- Implemented feature extraction techniques such as Feature Ranking, Univariate Feature Selection, Recursive Feature Elimination

## Dailygram

A news aggregator website

- Developed a web application where users can find easily access news in one platform.
- Added feature of interactivity with news such as commenting and reacting to news.

#### **Education**

2024/09 - Present Msc. Applied Data Science
Preston, UK University of Central Lancashire

2018 – 2023 **Bachelor of Computer Science** 

Dhulikhel, Nepal Kathmandu University
• CGPA: 3.4

 Datastructures, Algorithms and Complexity, Machine Learning, AI, Object Oriented & Dynamic Programming, Probability and Statistics, Linear Algebra, Software Engineering & Dependability.

2015 – 2017 **A Levels** 

Kathmandu, Nepal St. Xavier's College

#### **Skills**

Programming Languages Libraries

Python PyTorch, Tensorflow, Keras, Scikit-Learn, Pandas,

NumPy, Matplotlib, Seaborn, HuggingFace

Deployment

Docker Version Control
Git, Github, Gitlab

Database

MySQL, PostgreSQL, MongoDB

## Courses

## ChatGPT Prompt Engineering For Developers - DeepLearning.AI

### Leadership

### Chess Coordinator for KUCC Cup 2022

• Organised the chess tournament, managed 20+ participants, matches and schedules.

## Volunteering

2016/01 – 2017/01 Kathmandu, Nepal	New Nepal Society Center Orphanage • Mentoring children for school work
2015/05 – 2016/01 Kathmandu, Nepal	(PiE) St. Xavier's College, Maitighar  • Worked as an tutor to high school student

#### Languages

• Nepali • Hindi • English

#### **Hobbies**

Hiking and Trekking, Movies, Swimming, Chess