





SAUGAT THAPA CHHETRI

AI / ML ENGINEERING

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SKILLS

- Pytorch and python
- LangChain and text based GenAI implementation
- Vectorization(Pinecone and ChromaDB)
- NLP (nlTK and Spacy)
- Hugging Face
- Scikit-learn
- BeautifulSoup4, Scrapy, Selenium
- Streamlit
- MySQL
- Finetuning pre-trained models

EDUCATION

SCHOOL

Sainik Awasiya Mahavidyalaya
(Mangalgadhi, Surkhet)

2017 passout

HIGH SCHOOL

National Institute of Sciences and Technology (Lainchour, Kathmandu)

2018 - 2019

BACHELOR IN COMPUTER ENG.

National College of Engineering
(Talchikhel, Lalitpur)

2019 - 2024

PROFILE

Recent passout Computer Engineering student with strong programming skills and a solid technical foundation. Experienced in PyTorch programming, particularly with large language models and RAG implementation. Eager to apply diverse skills to data science, AI, and ML projects. Proficient in various AI and ML frameworks, NLP libraries, and database management systems. Skilled in finetuning pre-trained models

EXPERIENCE

INTERNSHIP IN PYTHON AND MACHINE LEARNING

Company name : Inspiring Lab (Dec 4-March 4)

- Model creation and training with high accuracy and precision.
- Working with already existing models from various sources.
- Working with Retrieval-Augmented Generation (RAG).
- Data cleaning, preprocessing and management.

FUSEMACHINES AI FELLOWSHIP (April 15th - Ongoing)

- Explored mathematical foundations of linear and logistic regression with Fuse datasets.
- Conducted data wrangling and EDA on SDOT Collision Data from 2005 to 2024.
- Anticipating further study in machine learning, deep learning, NLP, LLMs, and reinforcement learning.

PROJECTS:

AUTOMATION USING VOICE ASSISTANT

- Created and trained a personal voice assistant using NLP with PyTorch and Python.
- Enabled tasks like email sending, hardware control, and browser automation via voice commands.

CHATBOT USING LARGE LANGUAGE MODELS

- Created a chatbot using LLMs models from Hugging Face such as LLAMA(7B), MISTRAL AI, GemeniAI.
- Added features that allowed the chat functionality even in offline.

RETRIEVAL-AUGMENTED GENERATION(RAG) MODEL

- Used vectorization with cosine similarity in Pinecone for efficient data retrieval.
- Added PDF processing capabilities to enhance large language models.
- Enabled chatbots to access and use the latest information in real time.

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A I / M L E N G I N E E R I N G

PROJECTS:

ARTICLE SUMMERIZER USING PYTHON

- Developed an application to read and process English PDFs and documents and summerize it.
- Enabled user-selected summarization options for abstractiveness or extractiveness.

NEPALI TO ENGLISH DOCUMENT TRANSLATOR

- Developed an application to read English PDFs/documents and translate/save them in Nepali.
- Enabled saving translated documents in Nepali format.

BOOK RECOMMANDATION SYSTEM

- Developed a web application for users to purchase and rate books.
- Used cosine similarity to compare multiple users' choices for book recommendations based on ratings and purchase history.
- Implemented personalized book recommendations based on user behavior and preferences.

KATHMANDU POST SCRAPPER

- Engineered web scraping solution with Selenium, BeautifulSoup, and Scrapy to extract entire data(articles) from KTM post.
- Used JSON storage enabling automatic updates for latest news from kathmandu post.

DATA ANALYSIS PROJECT

- Worked on London accident records, focusing on data cleaning and preprocessing.
- Prepared data for future accident predictions.

SQL PROJECTS

- Proficient in SQL with hands-on experience in developing library and bookstore projects.
- Specialized in enhancing database security and implementing precise selection and filtration functionalities for improved system performance