SAUGAT THAPA CHHETRI
AI/ML ENGINEERNG

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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

SKILLS

- Pytorch and python
- LangChain and text based GenAI
- Pinecone and ChromaDB
- OpenCV
- NLP (nltk and Spacy)
- Hugging Face
- Finetuning ,Scikit-learn
- BeautifulSoup4, Scrapy, Selenium
- Streamlit
- MySQL

EXPERIENCE

INTERNSHIP IN PYTHON AND MACHINE LEARNING

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

- Specialized in high-accuracy model creation and training, leveraging existing models, Retrieval-Augmented Generation (RAG), and data management including cleaning and preprocessing.

FUSEMACHINES AI FELLOWSHIP   (April 15th - Ongoing)

- Explored linear and logistic regression with Fuse datasets, conducted EDA on SDOT Collision Data (2005-2024), and anticipate further study in machine learning, deep learning, NLP, LLMs, and reinforcement learning.

PROJECTS:

AUTOMATION USING VOICE ASSISTANT

- Engineered an innovative voice command system that automated email dispatch, hardware control, and browser navigation; increased operational efficiency by reducing manual task time.

CHATBOT USING LARGE LANGUAGE MODELS

- Developed a chatbot using LLMs from Hugging Face, including LLAMA (7B), MISTRAL AI, and GemeniAI, with added offline chat functionality.

RETRIEVAL-AUGMENTED GENERATION(RAG) MODEL

- Implemented vectorization with cosine similarity in Pinecone for efficient data retrieval, enhanced large language models with PDF processing capabilities, and enabled chatbots to access real-time information.

ARTICLE SUMMERIZER USING PYTHON

- Developed an application to read and summarize English PDFs and documents, with user-selectable 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.

DATA ANALYSIS PROJECT

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

BOOK RECOMMANDATION SYSTEM

- Developed a web application for book purchases and ratings, using cosine similarity to recommend books based on user ratings and purchase history, and implemented personalized recommendations based on user behavior and preferences.

KATHMANDU POST SCRAPPER

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

EDUCATION: BACHELOR IN COMPUTER ENGINEERING   from National College of Engineering (2019-2024)