Araksha Puri

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Work Experience

Digital Age Nepal   **Chakupat, Lalitpur**
Junior ML Engineer   *08/2024–Present*
- Used Scikit-Learn, Pandas and Numpy to Implement ML algorithms.
- Utilized PyTorch and Tensorflow to develop various Deep Neural Networks
- Used transformers and huggingface library to finetune various llm for tailored usecases.

Belwase Technologies   **Gwarko, Lalitpur**
Junior Developer   *06/2023–08/2023*
- Used ReactJS and FastAPI to build websites.
- Utilized Postman and sqlalchemy for designing and testing websites.

Education

IOE Pulchowk Campus   **Lalitpur**
Bachelor in Computer Engineering   *2019–2024*

KMC College   **Kathmandu**
High School, Science   *2017–2019*

Kumudini English Boarding School   **Nawalparasi**
Schooling   *2011–2017*

Frameworks
and Libraries

TensorFlow/PyTorch/Scikit-Learn: Deep learning/Machine Learning framework

Transformers/LangChain/Langgraph: LLM-based application framework

Pandas /NumPy: Data analysis tools

FastAPI/Express / NodeJS: Backend development

ReactJS / React Native: Frontend development

Certifications

2023: Supervised Machine Learning: Regression and Classification (DeepLearning.ai)

2023: Advanced Learning Algorithms (DeepLearning.ai)

2023: Reinforcement Learning - Developing Intelligent Agents (DeepLizard)

2023: Cloud Computing with React and NodeJs (IBM)

Projects

Manthan- AI Anaytics for Education: Built Manthan, an scalable AI solution for educational institutes which provides comprehensive analytics of students performance based on their grades, attendance, behavior and extracurricular participation. Also provides subjectwise analytics on grades along with recommendations.Furthermore, It also provides personalized reports to parents on timely basis.

Expert System for Personalized E-commerce: Built an e-commerce website using MERN stack. Implemented a sentence transformer to process user queries for understanding context and improving search results. Used TensorFlow to develop the Siamese network architecture of BERT and compared the generated embeddings with embedding of input query to rank results based on cosine similarity.

Explainable AI based Risk Profiling: Built an explainable risk profiling for bank customers using Scikit-Learn and Lime. Customer transaction pattern was also monitored using RNN with Tensorflow Explanations were fed to a finetuned Llama-1B model to further generate an clear summary of the customer using transformers and Pytorch.

Cheque Clearance with Signature verification: Built an signature verification app to be used for cheque clearance in banks. Uses state-of-art GOT-OCR to detect amount, account number and amount in word. Stored signature embeddings of all customers in postgresql using pgvector extension and compared the similarity with signature of cheques using metrics of choice.

Python Copilot: Developed a Python assistant using LangChain to answer Python-related queries using official documentation. Integrated Pinecone as a vector database and Cohere multilingual embeddings. Created a web app using Streamlit.

TicTacToe using MCTS: Used Monte Carlo Tree Search (MCTS) to develop an AI for playing Tic-Tac-Toe. For each move, It Simulates all possible game moves to determine optimal move.