SAINADH CHEBROLU

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EDUCATION:

Bachelor of Science – Computer Science **APR 2017 to MAY 2021**
KKR and KSR Institute of Technology and sciences, Andhra Pradesh, India.

Master of science – Engineering Data Science **JAN 2022 to MAY 2023**
University of Houston, Texas, USA.

SOFTWARE PROFICIENCY:

Programming Languages: Python, C, Java.
Machine Learning: NumPy, Pandas, Matplotlib, Spacy, Seaborn, Scikit-learn, TensorFlow, Pytorch, Langchain, OpenAI, LLM's.
Databases: MySQL, Oracle, MongoDB.
SDLC Methodologies: Agile, Scrum.
Project Management: JIRA, GIT.
Cloud: AZURE.

PROFESSIONAL EXPERIENCE

Walmart Global Tech – Bentonville, AR **JAN 2024 to PRESENT**
Data Scientist

- Developing a claim-easy-pro, to generate summary of the claims highlighting the necessary fields.
- Utilized **QAEval chain** and **QAGenerate chain** to validate the model responses.
- Integrated **retrieval QA chains** to enable complex question answering tasks on data sources.
- Implemented **SQL Chain**, **SQL agents** to enable query generation, execution, and Narrative generation by taking the user prompt.
- Employed **Milvus DB** to store the embeddings to perform a similarity search to retrieve the most relevant documents for the user questionnaire.
- Configured various parameters to indexing type, metric type to perform the **indexing** on the data.
- Implemented to generate **6 Line profit and Loss summary** dynamically by comparing KPI' and drivers.
- Developed a **storyteller** to generate the narratives for a selected period, **KPI's and Drivers**.
- Implementing **Ask Helen**, a chatbot functionality to interact with the user to generate a few line answers for the user input.
- Good knowledge in different prompt techniques like **one-shot, zero-shot, few-shot, Chain of thought prompting** learning to guide the model to generate the text based on the user input.
- Designed **Prompt Templates** for effective prompting and guiding the language model to generate the desired data outputs.
- Leveraging the **PowerBI** functionality and integrating with the LLM's to generate **DAX queries** and retrieve the results.

IvorSource(ML Apps) – Tampa, FL **AUG 2023 to DEC 2023**

Data Scientist

- Participated in all phases of **data acquisition, data cleaning, developing models, validation**, and **visualization** to deliver data science solutions.
- Used **Pandas, NumPy, Seaborn, Matplotlib, TensorFlow, PyTorch, Scikit-learn** in Python for developing various machine learning models.
- Developed Generative AI **LLM's** and **chatbots** with diverse functionalities, including Q&A and document search/summarization capabilities.
- Employed **Langchain** to generate vector embeddings for the documents and Hugging Face models for querying the data sources.
- Implement **RAG** pattern to extract the context from data store and include the context in the prompt for better results.
- Integrated GPT-4 capabilities into applications, leveraging natural language processing to extract valuable insights and enhance the overall user experience.
- Developed customized **NLP pipelines** for sentiment analysis, including text preprocessing, feature extraction, and model training, resulting in highly accurate sentiment classification.
- Experience with NLP libraries like **spacy** and Regular expressions(regex) to perform **tokenization, stemming, and lemmatization** techniques to prepare textual data for sentiment analysis, ensuring data quality and consistency.
- Integrated **AzureML** with Azure **Devops** to utilize the compute, version the datasets, use the pipelines.
- Containerized the application using **Docker** and Deploy it on Azure **Kubernetes**.

SWAGG Technologies – Bangalore, India **JAN 2021 to DEC 2021**

Jr Data Scientist

- Employed **Azure Machine Learning (AML)** for training, testing, Validation, deploying, and managing machine learning models.
- Utilized AML's automated machine learning (**AutoML**) capabilities to quickly generate and evaluate machine learning models.
- Developed a predictive model to generate **risk score** for shipment at the billing time for efficient handling throughout its life cycle.
- Used **PyTorch, TensorFlow** in Python for developing various machine learning models and Artificial intelligence models utilized algorithms such as Decision Trees, Logistic regression, Linear Regression.
- Worked on **freight claims analysis** on shipments using the history of transactions with supervised learning methods.
- Used various metrics (**RMSE, MAE, F-Score, ROC, and AUC**) for evaluation and validation of the performance of a model.

Graduate Academic Experience **JAN 2022 to MAY 2023**

- Implemented CNN model to classify the hand - written digits and utilized YOLO v5 to identify the objects in the images.
- Acquired a LSTM, with Auto-Regressive model to predict the stock prices. The context-window is used to add the previous prediction to the data. The MAPE score is used to calculate the model accuracy.

- Developed Random Forest, Decision Trees, Ensemble models to predict whether the customer will pick up the drug or not.
- Utilized various hyperparameters tuning techniques Like k-fold cross validation, LOOCV to identify the best subset of parameters.
- The model accuracy is validated using various metrics like Precision, Recall, F1-score, Accuracy.