Problem Statement

PS-04 Introduction to GenAI and Simple LLM Inference on CPU and fine tuning of LLM Model to create a Custom Chatbot

Project Problem Statement - "Empower finance professionals and enthusiasts with instant access to accurate, comprehensive, and tailored financial information through a conversational interface."

Unique Idea Brief (Solution)

Create a specialized finance chatbot by rapidly fine-tuning Llama 2 on a curated dataset.

Features Offered

Immediate Access to Financial Information: Receive rapid responses to your financial inquiries, saving you valuable time and effort.

Personalized Financial Guidance: Obtain tailored recommendations and strategies based on your specific financial goals and risk profile.

High Accuracy and Reliability: Trust in the chatbot's responses, which are generated using a state-of-the-art AI model trained on a curated financial dataset.

24/7 Availability: Access critical financial information whenever you need it, regardless of time or location.

Process flow

1. Data Collection and Preprocessing : Used the Finance Alpaca Dataset from Kaggle (also uploaded in repository), and reduced the target size so as to reduce training time due to unavailability of fast GPU's
2. Using The finetune llama on spr notebook from transformers for intel library and customising the learning rate + dataset
3. Downloading the results / fine tune peft model and pushing to hugging face
4. Using the model to generate results using a custom code provided in repository as use fine tuned model notebook

Technologies used

1. Intel Developer Cloud
2. Jupyter Notebook
3. Hugging Face Hub
4. Meta Lllama 2
5. Git and Git LS storage
6. Kaggle
7. Llora fine tuning

Team members and contribution:

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Conclusion

The Financial Llama can be continually enhanced by incorporating user feedback and the latest financial data,

Moreover, its adaptability makes it suitable for integration into various platforms like mobile apps or messaging services (e.g., WhatsApp), providing users with convenient and accessible financial guidance.

This flexibility, combined with continuous improvement, ensures the chatbot remains a valuable tool for finance professionals and enthusiasts seeking immediate and reliable insights.