Chethan H N

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Experienced Data Scientist/AI Developer specializing in Machine Learning, Deep Learning, Generative AI and Large Language Models (LLMs). Proficient in Python, PyTorch, Tensorflow, NLP and cloud deployments. Seeking a challenging role to drive innovation and deliver impactful results in AI projects.

PROFESSIONAL EXPERIENCE

Data Scientist/AI Nov 2024– Present
Fractal Analytics *Bengaluru, Karnataka*

- Developed an **Agentic AI chatbot** using Task Weaver and Python to support data scientists and AI developers in forecasting and predictive maintenance, enhancing operational efficiency and reducing downtime.
- Enabled natural language interaction with backend ML models, automating optimization workflows and accelerating data-driven decision-making across cross-functional teams.
- Developed LLM pipelines (Gemma 27B, BERT) for NPS analysis at GStore(**Google**), leveraging sentiment and topic modeling to extract insights from large-scale customer data.

Artificial Intelligence Developer Mar 2023 – Sep 2024
VIT - DRDO (Client) *Chennai, Tamilnadu*

- Developed user **behavior modeling** models for real-time anomaly detection and insider threat prevention, achieving a **25%** reduction in false positives compared to baseline systems.
- Utilized PyTorch, TensorFlow, and Transformers to optimize ML models for log analysis, achieving a 40% improvement in processing efficiency.
- Implemented **federated learning** concepts for **decentralized** model training, ensuring privacy and scalability across multiple endpoints, leading to a **50%** increase in model training scalability.
- Led deployment of federated learning models, improving **threat detection by 20%** with Docker for seamless integration.

Engineer Mar 2022 – Mar 2023
Kalyani Tech Park Pvt Ltd *Bengaluru, Karnataka*

- Used ERP systems to track project costs, schedules, and resources, ensuring accuracy and reliability of operational data.
- Built structured reports and dashboards for management using Excel/ERP analytics, improving visibility of key performance metrics.
- Consolidated project datasets into reusable templates for reporting and forecasting.
- Coordinated cross-functional teams using data-driven tracking methods, supporting timely project execution.

PROJECTS

Network Optimization Agentic AI Assistant *Python, Langgraph, NLP, SQL, LLM, Git*

- Designed and developed an intelligent AI assistant using Langgraph to forecast telecom network traffic, detect congestion, and automate optimization tasks.
- Built a real-time AI agent using the Langgraph framework for natural language interaction with complex ML pipelines.
- Automated optimization and predictive maintenance workflows through task chaining and stateful interactions, reducing manual overhead and system downtime.
- Impact: Enhanced operational efficiency and network reliability, while supporting data scientists and engineers with AI-driven, conversational decision support.

Customer Support Agent using Lang graph *Python, Lang graph, Langchain, NLP* *Link*

- Designed and implemented an **AI-powered customer support system** to streamline query handling, improve response accuracy, and enhance customer satisfaction.
- Developed an end-to-end pipeline for query categorization into predefined classes (e.g., Technical, Billing, General) using NLP techniques.
- Integrated **sentiment analysis** to assess customer tone and tailor responses accordingly, ensuring empathetic and contextually appropriate interactions.
- Leveraged LangGraph's **StateGraph** to create a flexible and scalable workflow for managing customer interactions and automating issue escalation when necessary.
- Impact: Reduced average response times by 15%, achieving significant automation in customer support operations.

Customer Loyalty Insights with NPS Analysis *Python, Gemma 27B, BERT, NLP, Generative AI, Topic Modeling*

- Led NPS analysis for GStore using NLP and Generative AI to extract insights from transaction data, call transcripts, and chat logs, improving customer loyalty metrics.
- Applied BERT-based topic modeling to identify recurring customer concerns (e.g., shipping delays), mapping them to NPS scores for targeted improvements.
- Presented findings to cross-functional teams, which could drive a **10% improvement in NPS** by addressing key customer expectations and major shipping and delivery issues.
- Impact: Focused on reducing **Average Handling Time (AHT)** by 15%, contributing to a 10% increase in customer satisfaction scores.

EDUCATION

Bachelor of Engineering (BE) Mysuru, Karnataka
ATME College of Engineering, VTU University *June. 2014 – June 2018*
*CGPA – **8.10***

TECHNICAL SKILLS

Programming Languages: Python

Database: SQL, Vector DB, Pinecone, Chroma DB, Postgresql, Big query.

Frameworks: Pytorch, Tensorflow, Keras, Lang chain, Llama index

Cloud Computing: AWS, Azure, Google Cloud Platform (GCP).

DevOps Tools: Docker, CI/CD pipeline (Github Actions)

Agentic Frameworks: Langgraph, Taskweaver, Autogen, CrewAI.

Libraries:

- Data Science: Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, SciPy
- Deep Learning & NLP : Hugging Face Transformers, Gensim, NLTK, SpaCy, BERTopic

Area of Expertise: Machine Learning, Deep learning, Natural language Processing, Neural Network, Large Language Models, Topic Modelling, Statistics, Generative AI, Retrieval augmented generation (RAG) , LLM Fine-tuning.

Other Skills: Git, Tableau, Linux.

COURSEWORK AND CERTIFICATIONS

- Generative AI with Large Language models
- Deep learning with Keras and Tensorflow
- Statistics
- Python
- SQL
- Machine learning
- Pytorch
- Tableau