Chethan H N

+91-7259578979 | chethanhn29@gmail.com | LinkedIn | GitHub | Portfolio

Experienced AI Developer specializing in Machine Learning, Deep Learning, and Large Language Models (LLMs). Proficient in Python, PyTorch, TensorFlow, NLP, CNNs, Docker, and cloud deployments. Seeking a challenging role to deliver impactful results in AI projects.

PROFESSIONAL EXPERIENCE

Artificial Intelligence Developer Mar 2023 – Present
DRDO Funded Project, VIT *Chennai, Tamilnadu*

- Collaborated with a team of data scientists and security experts to develop user behavior modeling models for real-time anomaly detection and insider threat prevention, achieved a 25% reduction in false positives, compared to baseline systems.
- Optimized log analysis ML models with PyTorch, TensorFlow, and Transformers resulting in a 40% speed enhancement and Reduced operational bottlenecks by 35%
- Implemented federated learning for decentralized model training, ensuring privacy 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.

Machine Learning Intern Sep 2022 – Nov 2022
Feynn Lab Services *Remote*

- Implemented Named Entity Recognition (NER) techniques to analyze and extract key entities from customer support tickets, resulting in a 20% increase in critical issue identification and resolution.
- Refined and fine-tuned NER models using spaCy and custom-built algorithms Enhanced entity recognition accuracy by 15%.
- Analyzed NER-extracted data to identify patterns, trends, and customer sentiments, leading to a 30% improvement in customer service response times.

PROJECTS

User Behavior Models for Real-time Endpoint Security *Python, Pytorch, SQL, Tensorflow, Docker*

- Project Objective: Developed advanced User behavioral AI models for anomaly detection and threat identification using host and network logs data in real time across 200 endpoints.
- Employed NLP algorithms (RNN, LSTM) Transformers for behavior analysis, implementing Federated Learning for decentralized model training across 200 User Endpoints.
- Impact: Personalized behavioral models for individual users, reducing false positives by 25% and decreasing overall security incidents by 30% through threat prevention measures against insider and external attacks.

Retail Query Assistant Chatbot *Python, Langchain, Hugging face, Chroma DB, Streamlit* *Link*

- Project Objective: Develop an end-to-end language model chatbot for handling complex natural language queries on a store's management MySQL database, supporting over 1,000 unique queries daily.
- Utilized ChromaDB to extract and embed over 10,000 queries and answers, forming a vector database for efficient search and retrieval.
- Engineered an SQL database chain using Langchain's and streamlined data retrieval process and reduced database query time by 35%, boosting overall system performance by 20%.
- Designed a streamlined User Interface using Streamlit, allowing users to input queries and receive LLM-generated responses.
- Project Impact: Enhanced query processing efficiency by 40%, providing store management for processing diverse and complex queries, resulting in a 25% reduction in manual query resolution time.

Knowledge Assist: A Smart Information Retrieval System *Python, Hugging Face, NLP,MongoDB, Streamlit,LLM*

Link

- Built an intelligent knowledge assistance system integrating retrieval-based and generative-based techniques, enhancing user search experience.
- Leveraged MongoDB for storage and retrieval, achieving a 30% improvement in search efficiency compared to traditional relational databases.
- Utilized open-source models like Sentence Transformer and MongoDB's vector search capabilities, resulting in a 50% reduction in resource consumption and a 40% increase in system scalability.
- Integrated Gemma for natural language generation (NLG) tasks, leading to a 40% reduction in response time for user queries.

EDUCATION

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

SKILLS

Programming Languages: Python

Database: SQL, Vector DB, Pinecone, Chroma DB.

Deep learning Frameworks: Pytorch, Tensorflow, Keras

Cloud Computing: AWS Sage maker, Azure, Google Cloud Platform.

LLM Frameworks and tools: Lang chain, Llama index, AutoGen, LangGraph, CrewAI, Ragas.

DevOps and Deployment Tools: Docker, CI/CD pipeline (Github Actions), Kubernetes, Kubeflow.

Libraries:

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

Data Science & Miscellaneous Technologies: Data cleaning, wrangling, visualization, modeling, interpretation, ETL, Hypothesis testing, Probability.

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

Other Skills: Git, GitHub, Tableau, Linux, Advanced Excel, Streamlit

COURSEWORK AND CERTIFICATIONS

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