Chethan H N

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

Experienced AI Developer specializing in Machine Learning, Deep Learning, and AI techniques. Proficient in Python, PyTorch, TensorFlow,, NLP and CNN, Docker and Cloud deployments. Seeking a challenging role to drive innovation and deliver impactful results in AI projects.

PROFESSIONAL EXPERIENCE

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

- Implementation of ML & DL techniques: Apply Machine Learning and Deep learning methods for real-time log data analysis.
- Collect and preprocess data: Use Wazuh SIEM and Python with regex for log data collection, preprocessing, labeling, and transformation of log data.
- Build and evaluate models: Utilize PyTorch, TensorFlow, and Transformers to create ML, DL, and AI models. Train and optimize models with labeled log data.
- Deploy and integrate solutions: Collaborate with teams to integrate ML based log analysis into existing cybersecurity infrastructure. Use Docker for efficient deployment and system integration.

Research Fellow Intern Dec 2022- Mar 2023
Madras Scientific Research foundation *Bangalore, Karnataka*

- Worked on a research project focused on image recognition using CNN for defect detection in fused deposition modelling.
- Involved in the development and implementation of a CNN model to identify defects in 3D printed parts.
- Participating in the training and evaluation of the model using a dataset of images with various defects

Machine Learning Intern Sep 2022 – Nov 2022
Feynn Lab Services *Bangalore, Karnataka*

- Participated in a team project focused on the development of an AI product/service prototype.
- Assisted in the selection of a prototype idea based on feasibility, viability, and monetization criteria.
- Developed a business model for the AI product/service, including market analysis, target audience, pricing strategy, and revenue streams.

PROJECTS

Real-time Anomaly Detection for Endpoint Security *Python, Pytorch, SQL, Tensorflow, Docker*

- Project Objective: To develop an advanced behavioral AI models for real-time anomaly detection and threat identification at Endpoints/Users using Host and Network Logs data.
- Tools & Techniques: Utilize Python, PyTorch, TensorFlow, Docker, and SQL database for log analysis.
- Applied ML algorithms, deep learning techniques (RNN, LSTM), NLP, Transformers, federated learning for accurate anomaly detection and classification.
- Impact: Enhance threat detection capabilities, improve system resilience, and provide proactive cyber security measures.

Water Bottle Image Classification *Python, Tensorflow, Kears, OpenCV CNN, Gradio Link*

- Project Objective: To Utilize Convolutional Neural Networks (CNN) on a custom labeled dataset of water bottle images to accurately classify water bottles into categories of full, half, or overflowing.
- Implemented robust data preprocessing and augmentation techniques to enhance model generalization.
- Developed and trained a CNN model using TensorFlow and Keras, achieving an accuracy of 88% on the test dataset.
- Deployed the model for real-time classification using Gradio, creating an interactive user interface.
- Created and labeled my own dataset of water bottle images, which was awarded a Bronze Medal on Kaggle platform.

Retail Query Assistant: Langchain & Google Palm LLM Integration

Python, Langchain, Hugging face, ChromaDB, Streamlit *Link*

- Project Objective: Develop an end-to-end Chabot language model tool that can handle complex natural language queries for a store's management MySQL database.
- Text Processing and Embedding: Utilize ChromaDB to extract and embed both queries and answers, forming a vector database.
- LLM Integration and Database Chain Creation: Integrate Langchain's Google Palm LLM with few short prompts to create an SQL database chain.
- User Interface Development: Design a streamlined UI using Streamlit, allowing users to input queries and receive LLM-generated responses.
- Project Impact: Efficient Query Processing: Developed a tool to assist store management by accurately processing diverse and complex queries.

EDUCATION

Bachelor of Engineering (BE) Mysuru, Karnataka

ATME College of Engineering , VTU University *June. 2014 – June 2018*

*GPA - **77 %***

TECHNICAL SKILLS

Programming Languages: Python

Database : SQL (MySQL), Vector Database(VectordDB)

Frameworks: Pytorch, Tensorflow, Keras,Langchain

Deployment Tools: AWS,Sagemaker,Google Cloud,Docker,Streamlit

Libraries: Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, SciPy, OpenCV, Hugging Face Transformers, Genism, and NLTK,Spacy.

Data Science & Miscellaneous Technologies: CI/CD pipeline (cleansing, wrangling, visualization, modeling, interpretation),ETL, Hypothesis testing,Probability.

Area of Expertise: Machine Learning, Deep learning, CNN, Natural language Processing(NLP), Neural Network, Predictive Modelling, Computer Vision, Transfer Learning, Large Language Models, Statistics, Decision Analytics.

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

RELEVANT COURSEWORK AND CERTIFICATIONS

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

LANGUAGES

- English
- Hindi
- Kannada
- Telugu

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