CHARAN R K

Bengaluru, KA

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PROFILE SUMMARY

AI Engineer and Data Scientist with hands-on experience in **Machine Learning, Deep Learning, Data Analytics and Prompt Engineering.** Proficient in **predictive modeling, time-series forecasting, and AI-driven optimization**. Adept at **data preprocessing, feature engineering, and Explainable AI**. Passionate about building **intelligent systems that drive data-driven decisions** and enhance business efficiency.

SKILLS

- Programming Languages : Python, C, SQL
- Frameworks & Libraries : Pandas, NumPy, TensorFlow, Keras, Scikit-Learn, Matplotlib, NLTK, Spacy, Gensim
- Tools : Excel, MySQL, GitHub, Tableau, PowerBI, ChatGPT, M365 Copilot

EDUCATIONAL CREDENTIALS

B.E. Artificial Intelligence and Data Science

Global Academy of Technology **| 2021 - Current | CGPA: 8.2**

Class 12 (PCMB) - CBSE

Sri Chaitanya Techno School **| 87% | 2021**

Class 10 - CBSE

Sri Chaitanya Techno School | **82% | 2019**

WORK EXPERIENCE

AI ENGINEER INTERN | GAS TURBINE RESEARCH AND ESTABLISHMENT (GTRE), DRDO

Sept 2024 - Dec 2024 | Bengaluru, KA

- Developed **predictive analytics models** for **Engine Health Monitoring** using sensor data from turbine engines.
- Processed **binary files** and applied **time-series forecasting (LSTM, GRU, XGBoost, and LGBM)**.
- Optimized models with **Hyperparameter Tuning (Optuna, HyperOpt)**, reducing **MAE by 30%**.
- Designed an **interactive GUI** for **real-time anomaly detection and visualization**.

PROJECTS

BlockTrack - Blockchain-Enabled Supply Chain Management System | GitHub Link | **May 2025**

- **Designed and developed** a decentralized supply chain system (BlockTrack) integrating **RFID and Ethereum smart contracts,** improving product traceability and transparency by **100%** across all nodes (supplier to retailer).
- **Implemented role-based access control and automated payments,** reducing manual intervention by **80%** and ensuring **tamper-proof** transaction records using Solidity and Web3.js.

Multilingual Sentiment Analysis | GitHub Link | **January 2025**

- Achieved **93% accuracy** in **sentiment analysis** using **XLM-RoBERTa**, improving **classification** across **8 languages**.
- Preprocessed **198M+ tweets**, applied **transformer-based embeddings** for **cross-lingual generalization.**

Fruit Detection and Yield Analysis | GitHub Link | January 2025

- Developed a **color thresholding-based fruit detection system** using OpenCV, achieving **92% accuracy** segmentation and counting of fruits in images.
- Utilized **HSV color space filtering** and **morphological operations** to refine detection, reducing processing time by **35%.**

Car Parking Space Detector YOLOv8 | GitHub Link | **November 2024**

- Developed an **automated parking space detection system** using **YOLOv8**, achieving **94% accuracy** in real-time vehicle occupancy detection.
- Optimized **computer vision models** for **edge deployment**, reducing inference time by **40%** for **smart city infrastructure.**

COURSES AND CERTIFICATIONS

- **ChatGPT Prompt Engineering for Developers –** OpenAI & DeepLearning.AI **(July 2024)**
- **Excel Skills Job Simulation –** JPMorgan Chase & Co. **(August 2024)**
- **Career Essentials in Data Analysis –** Microsoft & LinkedIn **(September 2024)**
- **Microsoft Copilot for Productivity –** Microsoft & LinkedIn **(September 2024)**
- **Google AI Essentials –** Google **(September 2024)**
- **Data Science for Engineers –** IIT Madras **(September 2023)**

ACHIEVEMENTS

- **NASA Ames Space Settlement Design Contest 2018 –** Secured Grade 9 **Second Prize** in **Space Hotel & Tourism Design**.
- Conducted **extensive research on space colonization** and selected for a **NASA facilitation visit** (unable to attend due to personal reasons).