Muccharla Praveen

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Education

GMR Institute of Technology — Rajam, India
B. Tech in CSE in Artificial Intelligence & Machine Learning | GPA: 9.41(up to 5th Sem) — June 2022 – April 2026

Narayana Junior College — Rajam, India
Intermediate, Board of Intermediate Education Andhra Pradesh| Score: 92.2% — June 2020 – April 2022

Bhashyam High School — Rajam, India
10th, Board of Secondary Education, Andhra Pradesh (BSEAP) | GPA: 10 /10 — June 2019 – April 2020

Skills Summary

Languages: C, Python, SQL, Java, HTML, CSS, JavaScript
Frameworks & Libraries: Scikit-learn, Pandas, Matplotlib, Seaborn, TensorFlow, Flask, Stream lit, OpenCV
Tools & Platforms: Jupyter Notebook, Google Colab, VS Code, GitHub, Kaggle
Soft Skills: Communication, Time Management, Self-Learning, Presentation

Work Experience

Machine Learning Intern | Unified Mentor | Sep 2024 – Oct 2024
- Designed and developed end-to-end ML models to solve real-world problems using Python and scikit-learn.
- Built a thyroid cancer classification model using Random Forest, achieving 98.7% accuracy, by analysing patient health records.
- Engineered a vehicle price prediction model with 82.6% R^2 score, using feature engineering techniques like One-Hot Encoding, imputation, and standard scaling.
- Performed cross-validation and RMSE analysis to evaluate model performance and ensure generalizability.

Foundations of AI | Microsoft | April 2025- May 2025
- Developed a content-based movie recommendation system using Sentence-BERT to generate semantic vector embeddings of movie overviews.
- Integrated cosine similarity for personalized and context-aware recommendations without requiring user history.
- Optimized inference time by precomputing embeddings and utilizing efficient similarity search techniques for scalable results.
- Delivered a deployable prototype that significantly improved recommendation precision and user satisfaction in testing.

Projects

Credit Card Fraud Identification | **Machine Learning |**
- Developed a fraud detection system using SMOTE to handle data imbalance and Random Forest for classification.
- Evaluated using AUC-ROC and precision-recall metrics for robust performance.
- Deployed a real-time prediction dashboard using Stream lit for user interaction.

Sign Language to Text and Speech | Deep Learning |
- Built a real-time ASL translator using OpenCV and a CNN-based gesture recognition model.
- Converted webcam-detected gestures into text and speech using text-to-speech APIs.
- Enabled digit, alphabet, and basic gesture recognition for accessibility use cases.

Sentence Autocompletion | Natural Language processing |
- Trained an LSTM-based deep learning model to suggest sentence completions from partial inputs.
- Handled sequential text data with tokenization and padding for model input.
- Improved typing efficiency and user experience through real-time predictions.

Certifications

Complete Data Science, Machine Learning, DL, NLP Bootcamp
- Covered end-to-end concepts in ML, DL, and NLP.
- Built real-world projects using TensorFlow, PyTorch, and scikit-learn.
- Focused on mathematical foundations and model optimization.

Deep Learning Certification – IIT Ropar (SWAYAM-NPTEL)
- Studied CNNs, RNNs, and advanced DL architectures.
- Completed hands-on assignments and real-world case studies.