GAYATHRE V

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Education

Integrated M.Sc. in Data Science (CGPA: 7.8 / 10.00)

Amrita Vishwa Vidyapeetham, Coimbatore

Higher Secondary Education (CBSE) — Marks: 402 / 500

Jawahar Higher Secondary School

Projects

Hybrid Explainable Intrusion Detection System for TCP Attack Detection

- Developed a hybrid explainable IDS using feature intersection and multi-model ensembles for accurate TCP attack detection with interpretable machine learning techniques.
- *Tools:* Python, Pandas, NumPy, Scikit-learn, Explainable AI Libraries.

Alzheimer's Disease Classification Using MRI Images

- Built hybrid deep learning ensembles for multiclass Alzheimer's disease stage classification from MRI scans.
- *Tools:* Python, TensorFlow, KerasCV, PyTorch, Hugging Face, Scikit-learn, NumPy, Pandas, OpenCV, Matplotlib, Seaborn.

Data-Driven Forecasting of Customer Behavior and Lifetime Value

- Built an end-to-end customer behavior prediction pipeline using machine learning, deep learning, and AutoML, including feature selection, hyperparameter optimization, and visualization on a 270+ feature dataset.
- *Tools:* Python, Pandas, NumPy, Scikit-learn, TensorFlow/Keras, AutoML Frameworks, Matplotlib, Seaborn.

Bias-Aware Toxicity Detection in Social Networks

- Developed a bias-aware NLP pipeline to classify online comments as toxic or non-toxic using the Jigsaw Unintended Bias dataset.
- Designed a tri-hybrid modeling approach and evaluated performance using bias-sensitive fairness metrics.
- *Tools:* Python, NLP Libraries, Deep Learning Frameworks, Scikit-learn.

Multi-Class Tumor Classification via Knowledge Distillation

- Implemented a multi-teacher–student knowledge distillation framework for efficient multi-class tumor classification.
- Achieved 99.4% classification accuracy while reducing model complexity.
- *Tools:* Python, PyTorch/TensorFlow, OpenCV, Medical Image Processing Libraries.

Skills

Programming Languages: Python, R, SQL (MySQL), MATLAB

Data Science & ML: NumPy, Pandas, SciPy, Scikit-learn, Matplotlib, Seaborn

Deep Learning & NLP: PyTorch, TensorFlow, Keras, Hugging Face Transformers

Tools & Platforms: Jupyter Notebook, Git, AutoML Frameworks, Experiment Tracking Tools

Professional Skills: Analytical thinking, technical communication, teamwork, leadership, public speaking

Languages

English — Full Professional Proficiency
Hindi — Full Professional Proficiency
Tamil — Limited Working Proficiency

Certifications

Google Data Analytics Professional Certificate — Coursera
Hands-on training in data cleaning, exploratory data analysis, SQL, statistical analysis, and data visualization using real-world datasets.

Extra-Curricular Activities

Participated in community service through the college NSS camp, contributing to the remodeling of KG Chavadi Elementary School.