VISHNU PRIYA MALLINENI

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SUMMARY

Detail-oriented and results-driven Computer Science graduate with hands-on experience in machine learning, predictive modeling, and data-driven research. Skilled in building forecasting models, classification pipelines, and network simulation frameworks using Python, TensorFlow, Scikit-learn, and cloud platforms. Demonstrated ability to design and evaluate AI-driven solutions through academic projects and research assistantship, including energy consumption forecasting and intelligent routing in wireless networks. Adept at translating complex datasets into actionable insights with expertise in statistical analysis, visualization, and deployment.

SKILLS

- Programming & Scripting: Python, R, Java, C, C++, C#, SQL, MATLAB, Bash, Git, Jupyter Notebook
- Machine Learning & AI: Scikit-learn, TensorFlow, Keras, PyTorch, XGBoost, Random Forest, Ensemble Learning, Deep Learning, Reinforcement Learning
- Data Science & Analytics: Data Cleaning, Feature Engineering, Statistical Modeling, Time-Series Forecasting, NLP, Predictive Analytics, Simulation Modeling
- Databases & Big Data: MySQL, PostgreSQL, MongoDB, Hadoop (basic), Spark (basic)
- Visualization & Reporting: Matplotlib, Seaborn, Plotly, Tableau, Power BI, Dash
- Cloud & Deployment: AWS (S3, EC2, SageMaker), Docker (basic)

Education

MS in Computer Science, *Wright State University*, Aug 2023 – Jul 2025
B.Tech in Electronics and Communication Engineering, *Sree Vidyanikethan Engineering College*, Aug 2019 – May 2023

Experience

Graduate Research Assistant, Wright State University – Dayton, OH — August 2024 – July 2025

- Built a simulation-based framework in Python to generate datasets for routing policy studies in Ad Hoc Wireless Networks.
- Designed four datasets representing mobile vs. static and random vs. clustered node distributions, capturing SINR, bottleneck rate, power consumption, and hop count.
- Implemented a lookahead-based greedy routing algorithm with adaptive power allocation, improving energy efficiency and communication reliability.
- Applied Random Forest (Scikit-learn) to classify Quality of Transmission (QoT), achieving >97% accuracy across diverse scenarios.
- Produced datasets and evaluation frameworks supporting supervised learning, reinforcement learning, and benchmarking of intelligent routing policies.

Projects

Energy Consumption Forecasting with Weather & IoT Data — September 2024 - January 2025

- Built a hybrid LSTM (TensorFlow/Keras) + ARIMA (Statsmodels) forecasting model to predict hourly electricity demand using IoT sensor + weather datasets.
- Performed Data preprocessing, feature engineering, and visualization with Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, Plotly.
- Reduced forecast error by 20% (MAE/RMSE) compared to baseline models, enabling applications in smart grid optimization.

Fake News & Misinformation Detection Using Multimodal Data — March 2025 - July 2025

- Developed a multimodal classification pipeline combining NLP embeddings (HuggingFace BERT/DistilBERT) with metadata features (publisher credibility, engagement patterns).
- Processed 50K+ articles using NLTK, SpaCy, Scikit-learn, XGBoost, and applied SMOTE to address class imbalance.
- Achieved 92% ROC-AUC, demonstrating robust detection of misinformation using deep learning + ML integration.

Certifications

- Amazon Web Services (AWS) Cloud Practitioner