Nandu Krishna Raji Mol

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nandu-kris7.github.io/Portfolio/index.html

Education

California State University, Northridge — Northridge, CA
Master of science in Computer Engineering — *Aug 2024 – Expected graduation May 2026*

APJ Abdul Kalam Technological University — Thiruvananthapuram, Kerala
Bachelor of Technology in Electronics and Communication Engineering — *Aug 2017 – March 2021*

Experience

Graduate Research Associate at CSUN ARCS — Jan 2025 – Present
California State University, Northridge — *Northridge, CA*

- Collaborating on a NASA-backed research project to improve drone processor fault tolerance for Mars missions
- Designing a buffer system to store critical flight data for auxiliary processor handoff during primary processor failure
- Addressing power constraints by enabling failover without running dual processors simultaneously

Co-Founder of WELKIN AVES — Oct 2019 – Jan 2024
Rajadhani Institute of Engineering and Technology — *Thiruvananthapuram, Kerala*

- Developed a drone prototype with a battery-swapping feature.
- Raised $12,000 for prototyping through various government grants.
- Incubated at AICTE IDEA Lab and Cisco ThingQbator.
- Partnered with Kerala Startup Mission and Rajadhani Institute of Engineering and Technology.

Projects

Flight Price Prediction | *Python, NumPy, Matplotlib, Scikit-learn, Random Forest Regression*

- Built a Random Forest Regression model to predict ticket prices based on airline, time, duration, stops, travel date
- Applied feature engineering and selection to enhance model accuracy and performance
- Optimized model using GridSearchCV; evaluated with MAE, RMSE, and R^2 Score
- Visualized feature importance to identify key factors affecting flight prices

Drug Classification | *Python, NumPy, Matplotlib, Scikit-learn, Decision Tree*

- Built a Decision Tree Classifier to predict drug type based on patient attributes (age, sex, BP, cholesterol, Na/K ratio)
- Performed data cleaning, feature encoding, and 10-fold cross-validation for consistent model evaluation
- Tuned hyperparameters criterion, max depth to balance bias-variance tradeoff
- Visualized decision tree, evaluated model using mean accuracy and standard deviation

Technical Skills

Languages: Python, SQL, Embedded C, VHDL, System Verilog
Machine Learning Algorithms: Linear Regression, Logistic Regression, Decision Tree, SVM, Random Forest, Naive Bayes, K-mean clustering, KNN, Adaboost
Developer Tools: Git, Docker, AMD Vivado, Libero SoC Design Suite, VS Code, Keil Vision, Microsoft Office, SolidWorks(CAD)
Libraries: pandas, NumPy, Matplotlib, seaborn, OpenCV, TensorFlow, Scikit-learn, Keras, XGboost

Leadership

Chief Creative Officer at Institution Innovation Council — May 2020 – May 2021
Rajadhani Institute of Engineering and Technology — *Thiruvananthapuram, Kerala*

- Spearheaded innovation and entrepreneurship initiatives under the Ministry of Human Resource Development, India
- Led campus-wide innovation initiatives, driving entrepreneurship and creative problem-solving across disciplines