

GOWRI SHAJU

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PROFESSIONAL SUMMARY

Mathematics and Data Science postgraduate with strong analytical foundations in statistics, Python, and data-driven modeling. Possesses hands-on experience in exploratory data analysis, machine learning model development, and performance evaluation through academic and project-based work. Skilled in transforming data into actionable insights using statistical reasoning, exploratory analysis, and predictive techniques. Adaptable, detail-oriented, and eager to contribute to data-centric teams across analytics, machine learning, and applied data science roles.

EDUCATION

Integrated MSc in Mathematics with Minor in Data Science

Amrita Vishwa Vidyapeetham, Amritapuri Campus, Kerala

2020 – 2025

CGPA: 9.36 / 10

Achievement: Campus Second Rank

TECHNICAL SKILLS

Programming: Python, SQL

Machine Learning: Regression, Classification, Clustering, Feature Engineering, Train-test split, Cross-Validation, Model Evaluation, Predictive Analytics

Mathematics & Statistics: Linear Algebra, Probability Theory, Hypothesis Testing, Statistical Inference

Libraries & Frameworks: Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn

Data Handling: Data Cleaning, Exploratory Data Analysis (EDA), Feature Scaling, Data Preprocessing, Data Visualization, Basic exposure to Data Structures (arrays, strings)

Databases: MySQL (SELECT, JOIN, GROUP BY), MongoDB (Basics)

PROJECT EXPERIENCE

Breast Cancer Detection Using Optimized Machine Learning Models

- Developed and evaluated multiple ML classifiers including Logistic Regression, SVM, KNN, and Random Forest for tumor classification.
- Implemented advanced **feature optimization algorithms** such as Genetic Algorithm (GA), Particle Swarm Optimization (PSO), Ant Colony Optimization (ACO), Differential Evolution (DE), and Whale Optimization Algorithm (WOA).
- Achieved **98.24% classification accuracy** using Logistic Regression with GA-optimized features.
- Conducted systematic performance comparison using accuracy and validation metrics to ensure model robustness.

Tools: Python, Scikit-learn, NumPy, Pandas, Matplotlib, Evolutionary Optimization Algorithms

Smartphone Obsolescence Time Prediction Using Machine Learning

- Created a **large-scale synthetic dataset (80,000 records)** incorporating hardware and market-based features.
- Trained regression and classification models to predict smartphone longevity; SVM achieved **83% accuracy**.
- Designed and deployed an **interactive Gradio web interface** for real-time prediction and user input handling.
- Demonstrated end-to-end machine learning workflow from data generation to deployment-ready inference.

Tools: Python, NumPy, Pandas, Scikit-learn, Gradio, Matplotlib

RESEARCH & PUBLICATIONS

Optimized Feature-Based Machine Learning Models for Breast Cancer Detection

Conference: ICT4SD 2025

Series: Lecture Notes in Networks and Systems, Vol. 1650

Publisher: Springer, Cham

CERTIFICATIONS

- Python Programming Short Course – MyCaptain (Jan 2022 – Feb 2022)
- Data Analytics with Python – MyCaptain (May 2023 – Jun 2023)

LANGUAGES

- English
- Malayalam
- Hindi