Arya Pramesh

Email: aryapramesh123@gmail.com
Mobile: +919400321323
Github: https://github.com/ARYAPRAMESH

Education

- **Amrita Vishwa Vidyapeetham** — Coimbatore, India
  Bachelor of Technology - Computer Science and Engineering; GPA: 7.65 — *August 2023 - July 2027*
  Courses: *Operating Systems, Data Structures, Analysis Of Algorithms, Foundations of Data Science , Machine Learning, Computer Networks, Databases*

Skills Summary

- **Languages**: Python, C, SQL, JAVA
- **Tools**: VS Code, GIT, MySQL
- **Platforms**: Linux, Windows, Arduino
- **Soft Skills**: Leadership, Event Management, Public Speaking, Time Management

Projects

- **Constraint-Aware Room Traversal Using Graph-Based Shortest Path Algorith This project uses a graph-based shortest path approach with state tracking to find the minimum time required to visit all rooms while collecting a key and avoiding a trap until the key is obtained. It applies a priority queue (Dijkstra-style) algorithm with visited-state management to handle constraints efficiently.**: -2pt 2pt
- **Password-Protected Lock System This project integrates computer password authentication with visual and sound feedback and provides a quick, low-cost, and efficient alternative to mechanical locks. The system employs 12C communication for LCD interfacing and NVIC interrupt handling for timely responses and thereby ensures both accuracy and responsiveness during operation.**: -2pt 2pt
- **FOG-ENABLED SMART PKU MONITORING SYSTEM Designed and developed a fog-enabled smart monitoring system for Phenylketonuria (PKU) that emphasizes real-time data processing and edge intelligence. The system integrates IoT-based PKU sensors with fog nodes to perform local data analysis, reducing latency and dependence on cloud-only processing. It enables timely detection of abnormal phenylalanine levels, improves response efficiency, and enhances scalability and reliability by distributing computation across edge, fog, and cloud layers. The model demonstrates efficient data flow, reduced network congestion, and improved healthcare decision support.**: -2pt 2pt
- **ClimateLens: NLP Insights from Climate News A text analytics project that applies Natural Language Processing (NLP) techniques to analyze climate-related news articles. The project focuses on data preprocessing, keyword extraction, and text analysis to identify important themes, trends, and patterns in unstructured news data. Visualizations are used to present insights, helping to better understand public discourse and emerging topics related to climate change.**: -2pt 2pt

PAPER PUBLICATIONS

- Breast Cancer Detection Using Deep Learning Techniques

  This ongoing research focuses on developing an automated breast cancer detection system using medical imaging and deep learning models. The objective is to accurately classify benign and malignant tumors, enabling early diagnosis and supporting clinicians with reliable computer- aided diagnostic assistance.

- Cervical Cancer Survival Prediction Using Machine Learning

  This project aims to predict the survival duration of cervical cancer patients by analyzing clinical and demographic data. Machine learning models are employed to estimate survival probabilities, assisting in personalized treatment planning and improving long-term patient care strategies.

- A Robust Image Forgery Detection Approach Using DCT-Based Features and SVM Classification

  This paper has been accepted and is currently under preparation for conference presentation. The proposed method utilizes Discrete Cosine Transform (DCT)-based feature extraction combined with Support Vector Machine (SVM) classification to effectively detect forged images, offering robustness against common image manipulation and tampering techniques.

Volunteer Experience

- National Service Scheme (NSS) Volunteer Experience

  I served as an NSS volunteer from 2023 to 2025, actively participating in various social service initiatives. I took part in NSS camps where we visited government schools, painted classroom walls, and conducted games and activities for children to encourage learning and engagement. I was also involved in seed ball making campaigns to promote environmental awareness and served as a volunteer in blood donation drives, contributing to community welfare and social responsibility.