

ADITH R LAL

SECOND-YEAR COMPUTER SCIENCE ENGINEERING STUDENT

CONTACT



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EXPERTISE SKILLS

Programming Languages:

C, C++, Python, Java, HTML, CSS, JS

Machine Learning:

Basics of ML Models, currently learning ML concepts

• Embedded Systems:

Arduino-based robotics

• Tools & Frameworks:

Git, GitHub, Matplotlib, NumPy,

Matlab, debugging skills

Soft Skills:

Teamwork, leadership, communication, time management

LANGUAGE

English

Hindi Malayalam

KEY ACHIEVEMENTS

School Head Boy

Led student body, managed events, and served as a link between administration and students.

PASSIONS & INTERESTS

- Programming & Algorithm Design
- Technology & Innovation
- **Content Creation & Education**
- · Team Collaboration & Personal Development

PROFILE 01

Aspiring Computer Science Engineer with a strong passion for programming, algorithms, and software development. Proficient in C, C++, Python, Java, and JavaScript, with hands-on experience in Object-Oriented Programming (OOP), and Data Structures and Algorithms (DSA). Skilled in using Git and GitHub for version control and collaboration.

Actively exploring the fields of Artificial Intelligence and Machine Learning, with foundational knowledge of linear regression, deep learning, and practical exposure through MATLAB, having completed ML and Deep Learning Onramp courses.

Experienced in Arduino-based robotics and embedded systems projects, demonstrating both technical problem-solving and team collaboration. Comfortable with data analysis and visualization using Matplotlib and NumPy.

Always eager to learn and innovate, with a keen interest in building intelligent systems and contributing to impactful software solutions.

02 **EDUCATION**

BTech Computer Science Engineering

Cochin University of Science and Technology (2024 - ongoing)

• CGPA - 9.88

Senior Secondary School (SSCE)

Amrita Vidyalayam, Pathanamthitta (June, 2022 - March, 2024)

- CBSE Board | Physics, Chemistry, Maths, Biology
- 97% Score in Boards

Secondary School (SSE) (Part-time, April 2024 - Present) Amrita Vidyalayam, Pathanamthitta (June, 2016 - March, 2022)

- CBSE Board
- 96.6% Score in Boards

03 **EXPERIENCE**

Kottak Medical Systems

- Assisting in component-level, card-level, and software-level repair, calibration, design, and consultancy of medical equipment.
- Worked on imaging equipment: X-ray, CT scan, O-arm, mammography, MRI, PET, ultrasound, and color doppler systems. Supported surgical devices: surgical robotic systems, endoscopes, and electrosurgical units.
- Experienced with laboratory equipment: fully auto chemistry analyzers, hematology analyzers, ELISA systems, and blood gas analyzers (BGA). Handled ICU equipment: ventilators, patient monitors, defibrillators, and dialysis machines.

AI/ML Workshop at NITC

Attended an AI/ML workshop at NITC, where I gained foundational knowledge of machine learning concepts, including data preprocessing, model training, and evaluation. Learned and implemented linear regression for predictive analysis using real-world datasets.

04

PERSONAL & ACADEMIC PROJECTS

1. **Arduino-based Robotics Projects** - Working on automation using sensors, actuators, and microcontrollers.

• Project: Sunflower - Dual-Axis Solar Tracker

Designed and developed an Arduino-based dual-axis solar tracking system using 5 LDR sensors and 2 MG996R servo motors to maximize solar energy capture. Implemented real-time light intensity detection and motor control logic for optimal panel orientation. The system enhances energy efficiency by dynamically adjusting to the sun's position throughout the day.

Github Link: https://github.com/adi-makes/solar_tracking_system.git

2. **Software Development in C, C++, Python, Java** – Developing structured programs.

3. Breast Cancer Prediction Project

- Brief: Developed a machine learning model to accurately classify breast tumors as
 either malignant or benign based on various clinical features. The project
 involved a comprehensive data pipeline from exploration and cleaning to model
 training and evaluation.
- Key Methodologies: Data loading, exploratory data analysis, data cleaning (handling irrelevant columns), and data visualization.
- Models Trained: Logistic Regression, Random Forest Classifier, and Support Vector Classifier (SVC).
- GitHub Link: https://github.com/adi-makes/Breast_Cancer_Prediction_test.git

4. Glucose Level Prediction Project

- Brief: Created a predictive machine learning model to forecast glucose levels
 using health-related features from the Framingham dataset. This project
 emphasized robust data preprocessing, insightful feature engineering, and
 rigorous model evaluation.
- Key Methodologies: Data import and exploration, extensive data cleaning (including null value imputation and format correction), visualization of health indicators, and feature selection/engineering.
- Models Trained: Logistic Regression, Decision Tree Regressor, and Random Forest Regressor.
- $\bullet \quad Git Hub\ Link: https://github.com/adi-makes/Glucose_Prediction_Summary.git$

5. Portfolio Website

- A personal portfolio website developed using HTML, CSS, and JavaScript to
 professionally showcase my skills, projects, and professional profile. This project
 highlights my front-end web development abilities, including proficiency in
 creating responsive designs and interactive user interfaces.
- GitHub Link: https://github.com/adi-makes/portfolio1.git
- Portfolio Site: https://adi-makes.github.io/portfolio1/

6. Tic-Tac-Toe Game

- A website-based Tic-Tac-Toe game developed using HTML, CSS, and JavaScript.
 This project demonstrates my proficiency in front-end web development,
 including creating interactive user experiences and implementing game logic.
- GitHub Link: https://github.com/adi-makes/tictactoe.git
- Game Site Link: https://adi-makes.github.io/tictactoe/