

Thirumaran Eniyavan

Department of Computer Engineering

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 eniThiru |  eniyvan |  Portfolio

About Me

Aspiring Software Engineer with a strong focus on web technologies and cloud infrastructure. Experienced in building full-stack applications using React, Spring Boot, and AWS through academic and team-based projects. Passionate about problem-solving and eager to contribute to real-world software systems.

Technical Skills

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|----------------|---|
| Languages | Java, JavaScript, SQL, Python, C++ |
| Frontend | React.js, React Native, HTML5, CSS3 |
| Backend | Spring Boot, REST APIs, GraphQL |
| Databases | MySQL, PostgreSQL |
| Cloud / DevOps | AWS (EC2, S3, IoT Core, RDS), Git |
| ML / AI | TensorFlow, Keras, CNNs, scikit-learn |
| Tools | IntelliJ IDEA, VS Code, Postman, Cursor |

Education

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|----------------|---|--------------------------|
| 2021 – Present | University of Peradeniya B.Sc. Eng. (Hons) specializing in Computer Engineering | CGPA: 3.60 / 4.00 |
| 2012 – 2020 | Jaffna Hindu College | G.C.E. A/L: 2A, B |

Projects

Green Tech: Greenhouse Automation (Nov 2024 – Jul 2025)

Group | 

- Contributed to a team developing an IoT-based autonomous greenhouse system with web and mobile applications for real-time monitoring and control of environmental factors.
 - Hardware:** Designed and prototyped an ESP32-based system featuring automatic creation of AWS IoT Core topics.
 - Backend/AWS:** Architected a Spring Boot RESTful API integrated with AWS IoT Core via MQTT protocol; implemented JWT authentication and WebSockets.
 - Mobile App:** Built a cross-platform React Native application (iOS/Android) for device and user registration.
 - Implemented real-time alerting and automation rules enabling autonomous control of irrigation, ventilation, and lighting based on sensor thresholds.
 - Individual Contributions:** Drove full-stack development using Spring Boot and React, engineered MQTT communication flows, implemented JWT security, and managed AWS deployment to ensure a secure, scalable IoT ecosystem.

Technologies: Spring Boot, React Native, React.js, MySQL, JWT, AWS (IoT Core, EC2, RDS), ESP32, C++, Git

MIS for Non-Academic Establishment Division (Apr 2024 – Nov 2024) Group |

- Developed a web-based Management Information System to automate the handling of non-academic staff leave.
 - Designed dynamic forms and multi-level approval workflows using Spring Boot.
 - Implemented role-based access control for staff, department heads, and administrators.
 - Built administrative dashboards with reporting and leave analytics.
 - Integrated email notifications and leave status tracking.
 - Designed a normalized MySQL database with validation and audit logging.

Technologies: Spring Boot, Java, MySQL, REST APIs, JavaScript

Sign Language Recognition Platform (Dec 2023 – Feb 2024)

Group | 

- Developed a web-based sign language learning platform using Convolutional Neural Networks.
- Achieved over **90% classification accuracy** on a custom dataset.
- Integrated a **React.js** frontend with a **Flask** backend for real-time hand sign prediction using **OpenCV**.

Technologies: TensorFlow, Keras, React.js, Flask, OpenCV, Python

Research

A Hierarchical Hybrid Framework for Intrusion Detection

Group | 

- Developed a web-based sign language learning platform using Convolutional Neural Networks.
 - **Model Performance:** Achieved over 90% classification accuracy on a custom dataset.
 - **Real-Time Prediction:** Integrated a React.js frontend with a Flask backend for real-time hand sign prediction using OpenCV.

Technologies: Python, TensorFlow, PyTorch, scikit-learn, Pandas, NumPy, Wireshark

Certifications

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- 2024 AWS Cloud Practitioner Essentials – AWS
 - 2023 Introduction to Machine Learning – Coursera
 - 2023 Full-Stack Web Development with React – Meta
 - 2022 Data Structures and Algorithms in Java – Udemy

Referees

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