

PAMITH SALWATHURA

Electrical Engineering Undergraduate

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Profile

Highly motivated and dedicated individual with a strong work ethic, adaptability, and fast learning ability. Thrives in both team-based and independent settings, collaborating effectively to achieve goals. Committed to continuous learning and delivering innovative solutions.

Technical Skills

- Machine Learning and AI
- Large Language Models (LLMs)
- Programming (Python, C++, Java)
- Robotics Operating System (ROS)
- PCB Design
- Electronics

Soft Skills

- Critical Problem Solving
- Adaptability
- Communication & Interpersonal Skills
- Leadership & Collaboration

Work Experience

Trainee Electrical Engineer

Nov 2023 – May 2024

Vega Innovations

- Contributed to automotive electronics, focusing on EV charge controller projects
- Built an EV datalogger using a PocketBeagle and Grafana dashboards
- Leveraged CAN communication for embedded EV applications

Head of Academy

Mar 2023 – Jan 2024

RoboticGen Pvt Ltd

- Oversaw academy operations and team management
- Gained leadership, project management, and robotics expertise

Education

BSc Engineering (Hons) in Electrical Engineering

2020 Aug – Present

University of Moratuwa

- Minor in Pattern Recognition (Followed modules like Engineering Optimization, Deep Learning for Vision and Convex Engineering)

Richmond College Galle

2006 – 2019

- G.C.E A/L (2019) - Physical Stream – 3As
- G.C.E O/L (2016) – 9As

Projects

Finetuning an LLM for a Low-Resource Language & Wheelchair Navigation with LLM Command Integration (Ongoing)

Sponsored Project —
Decryptelix

- Conducted LoRA fine-tuning by collecting datasets via web scraping and synthetic data generation

- Developed a checkpointing mechanism to resume and optimize continued pretraining
- Explored practical deployment of LLMs for low-resource languages under financial constraints

End-to-End Machine Learning Pipeline for Customer Churn Prediction

Independent Project

- Created an ML pipeline for imbalanced churn data using SMOTE, Logistic Regression, Random Forest, and XGBoost
- Achieved significant F1-Score and accuracy improvements with hyperparameter tuning

Machine Learning Project: CNN for Image Classification

*Semester 5 - Group
Project (Aug 2023 – Oct 2023)*

- Designed and evaluated a custom CNN model vs. a pre-trained ResNet
- Leveraged Adam Optimizer and sparse categorical cross-entropy for robust training

Maze Solver Project Competition

*Semester 7 - Group
Project*

- Built a maze-solving robot using Floodfill and DFS algorithms on Arduino
- Integrated ultrasonic sensors for obstacle detection and navigation

Clubs and Societies

- Secretary, IEEE Power Electronics Society (University of Moratuwa)
- Assistant Secretary, Classical Musical Society (University of Moratuwa)
- Secretary, Richmond College Science Society
- Member of the School Orchestra

Hobbies

- Violin player
- Hiking enthusiast

Courses & Certifications

- [Machine Learning Specialization – Advanced Learning Algorithms](#) [↗](#)
Stanford University (USA)
- [Machine Learning Specialization – Supervised ML: Regression and Classification](#) [↗](#)
Stanford University (USA)
- [Creating Multi Task Models With Keras – Coursera Project Network](#) [↗](#)