Tenura Pinsara Pasandul

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Portfolio TenuraPinsara tenura2001

Profile Summary

An ambitious engineering student driven by a deep curiosity for how intelligence and machines can shape the future. I explore the intersection of AI, embedded systems, and innovation, aiming to build technologies that not only function but think, adapt, and inspire. With a forward-thinking mindset, I strive to contribute to a world where intelligent systems empower people and solve real-world challenges.

Education

University of Moratuwa *Mar 2023 – Present*
BSc (Hons) in Artifitial Intelligence

Moratu Maha Vidyalaya *2019 – 2021*
GCE A/L

- Z-Score : 2.05
- Subjects: Physics ,Chemistry ,Combine Mathematics

Experience

Intern Electronic Engineer *Colombo, Sri Lanka*
Protonest IoT *Aug 2025 – Present*

- Collaborated with senior engineers on various ongoing projects, contributing to circuit design, firmware development, and documentation.
- Gained hands-on experience with tools and platforms such as STM32, ESP32, PCB design, and system troubleshooting.

Robotics Mentor *Parkland1, Sri Lanka*
RoboticGen *Feb 2025 – Aug 2025*

- Conduct engaging and hands-on sessions on Robotics and IoT, tailored for both school students and university peers
- Maintain a high mentoring performance score of 97.6 reflecting consistent positive feedback and learner engagement.

Core Competencies

Microcontroller Programming: ESP32 , Atmel , STM32 , PIC

PCB Design: KiCad , EasyEDA , Altium

Embedded ML: TensorFlow Lite, Edge Impulse

AI/ML: Advanced EDA , LLM Fine Tune , XGBoost

3D Modeling: Onshape , TinkerCAD

Software: Python , Node-RED , C++ , C

FPGA/ASIC: System Verilog , Xilinx Artix-7

Projects

Smart Plug - Embedded Product Design for IoT *github.com/repo*

- Designed and developed a Wi-Fi-enabled smart plug as a solo project. Implemented embedded firmware for remote ON/OFF control, power monitoring features, and mobile app connectivity, emphasizing safety and cost-effectiveness.

IoT Learning KIT with ESP32 - Embedded Product Design *github.com/repo*

- Designed and developed a complete IoT learning kit independently using the ESP32 microcontroller. Created custom PCB designs, firmware, and structured learning modules to help students explore sensor interfacing, Wi-Fi communication, and cloud data logging , This one will be commercial Product

Fast Line Following Robot with PID - Robotics *github.com/repo*

- Built a high-speed line-following robot fully by myself using infrared sensors and a PID control algorithm. Designed and implemented the hardware, software logic, and PID tuning to ensure smooth and accurate line tracking for robotics competitions.

Hello World to TinyML - Embedded AI *github.com/repo*

- Personally implemented a TinyML project from scratch by training a lightweight neural network and deploying it on a microcontroller using TensorFlow Lite for Microcontrollers. Demonstrated edge AI capabilities in real-time using embedded sensors and classification logic.

Smart Medibox - Embedded System and IoT *github.com/repo*

- Independently created a smart medicine box equipped with alert systems, dosing schedule reminders, and IoT features. Developed the enclosure, hardware circuit, ESP32 firmware, and mobile alert integration to support elderly users in medicine management.

Certifications

Embedded Product Design for IoT – SkillSurf *Certificate*

Foundation of Digital System Design with SystemVerilog – SkillSurf *Certificate*

Artificial Intelligence in Embedded System – SkillSurf *Certificate*

Microcontroller-Based Embedded System Design – SkillSurf *Certificate*

Introduction to Embedded Machine Learning – Coursera / Edge Impulse *Certificate*

AI Principles with Edge Computing – Coursera / Arm Education *Certificate*

Altium Education PCB Basic Design – Altium Education *Certificate*

Community and Leadership

IES Labs - B22 President *May 2025 - Present*
Faculty of IT , UoM , IoT and Embedded system Research Lab

Co-Chire - Danuma Yathra Organization *Aug 2023 – Present*

References

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