IRASH PERERA

B.Sc. Engineering Honours
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University of Moratuwa.

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EDUCATION

- **B.Sc. (Hons) in Computer Science and Engineering, specializing in Data Science and Engineering.**
  - University of Moratuwa   (2021 – Present)
  - **CGPA**: 3.8514 / 4
  - **Dean's List**: Achieved every semester to date. (Semester 1 - 3.85, Semester 2 – 3.84, Semester 3 – 3.86)

- **GCE Advanced Level Examination – Physical Science Stream**
  - Central College, Anuradhapura   (2020)
  - **Island Rank**: 379
  - **Z-score**: 2.2812
  - Combined Mathematics – A/ Physics – A/ Chemistry – A/ General English - A

- **GCE Ordinary Level Examination**
  - Central College, Anuradhapura   (2017)
  - 8As and 1B, B for English Literature

PROJECTS (View on Portfolio)

1. **EduGenius** – A multimodal educational AI assistant, including Retrieval-Augmented Generation (RAG), to dynamically generate contextually relevant guidance and explanations for the students in math problems offering a comprehensive and interactive tutoring experience by delivering real-time feedback, and performance tracking. (Ongoing)

2. **PlateVisionAI** – A project that aims to automate the process of license plate recognition and vehicle tracking.

3. **Research Companion** – AI assistant to extract precise information from research papers and articles.

4. **HR Management System** – A fully comprehensive full stack HR management system to manage employee profiles, leave requests, approvals, and report generation, while offering customizable features and non-functional requirements.

5. **VirtualFingerMouse** – A system to control the computer only with hand gestures without using a mouse.

6. **Object Tracking System** – A system to track people in urban areas.

7. **Multiple Hand Gesture Detection System** – A simple application to detect most common hand gestures with a model trained with custom dataset.

8. **Natours** – A backend RESTful API for providing robust functionality for tour management along with integrated comprehensive frontend development. ↗
9. **RPAL Language Project** – A python-based interpreter for the Right Reference Pedagogic Algorithmic Language. ↗
10. **Pintos OS Projects** – Two projects focused on two core modules in Pintos – an interactive shell initialization and user program functionalities. ↗
11. **Nano Processor Digital Design Project** – Digital design of 4-bit nano processor with integrated multiple components and capabilities of executing simple instructions. ↗

Tech Stack

Languages		Machine Learning and Data Processing		Application Development	
Python	HTML	Scikit-learn	Pandas	NodeJS	React
C	PUG	Keras	TensorFlow	Streamlit	Git
C++	CSS	NumPy	Langchain	MongoDB	MySQL
Java	TypeScript	Chroma	OpenCV		
JavaScript		Mediapipe	Langfuse		

Honors and Awards (View on Portfolio ↗)

1. **1st Place** - Cypher 2.0 Inter-University Hackathon, organized by Kothalawala Defence University and AION Campus Pvt. Ltd. (March 2024)
2. **Finalist** - Crack the Code - Enigma '24 Hackathon, organized by the Mathematical Society of the University of Moratuwa. (March 2024)
3. **Dean's List** - Consistently achieved from Semester 1 to Present. (2021 – Present)
4. **3rd Best All-Island Performance** - Senior Division, 2019 Australian National Chemistry Quiz, organized by the Royal Australian Chemical Institute and conducted by the Institute of Chemistry Ceylon. (November 2019)
5. **Awarded for Academic Performance** – A/ Central College Prize Giving, 7 consecutive years (2014-2020)

Volunteering

1. **Organizing Committee Member – EXMO 2023**
   An esteemed member of the Organizing Committee for EXMO 2023, the flagship technological exhibition of the University of Moratuwa (2023)
2. **Design Team Lead – VRCADE 2.0**
   Volunteered as Design Team Lead in VRCADE 2.0 which is organized by the IEEE Student Branch, University of Moratuwa. (2024)
3. **Design Team Member – VRCADE**
   Volunteered as Design Team Member in VRCADE which was organized by the IEEE Student Branch, University of Moratuwa. (2023)