

Yasiru Laksara

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 [Yasiru Laksara](#) |  [YasiruLaksara](#) |  [yasirulaksara.github.io](#)

Dept. of Computer Science and Engineering, University of Moratuwa, Sri Lanka



OBJECTIVE

I am a self-motivated Computer Science and Engineering undergraduate at the University of Moratuwa, dedicated to becoming a qualified professional in the field. I am particularly interested in Data Science, Machine Learning, and Web Development, and I am committed to continuous learning and effective teamwork. I aim to apply my growing expertise to make meaningful contributions to the fields of machine learning and artificial intelligence.

EXPERIENCE

CML Insight Inc.

Machine Learning Engineering Intern

Dec 2024 – May 2025

Remote / Sri Lanka

- Developed intelligent multi-agent systems for a Causal AI-Driven Education Intervention System, utilizing OpenAI Agent SDK and Google ADK to support adaptive human-AI collaboration.
- Engineered autonomous pipelines for LLM performance testing using frameworks like DeepEval and gained hands-on exposure to fine-tuning OpenAI-based models tailored to specific use cases.
- Developed a custom function-based plugin to enhance document extraction workflows for unstructured research data, optimizing system efficiency and reducing API costs.
- Conducted technical research on agentic architectures and delivered a Tech Talk on OpenAI Custom Functions to share implementation strategies with the engineering team.

EDUCATION

• University of Moratuwa

B.Sc. Engineering (Hons) in Computer Science and Engineering, specializing in Data Science and Engineering

◦ GPA: 3.67/4.00

2022 – Present

Katubedda, Sri Lanka

• H/Vijayaba National School Hungama

GCE Advanced Level Examination – Physical Science Stream

◦ Z-score: 2.0939

Oct 2020

Hungama, Sri Lanka

◦ Combined Mathematics – A / Physics – A / Chemistry – A / General English – A

• H/Vijayaba National School Hungama

GCE Ordinary Level Examination

◦ 8 As and 1 B (B in English Literature)

Dec 2017

Hungama, Sri Lanka

PROJECTS

• NeuraShield — Adaptive Web Defense System (Final Year Project)

Jul 2025 – Present

Tools: Python, FastAPI, PostgreSQL, Hugging Face Transformers, ONNX Runtime

- Developing an adaptive, real-time web defense system using Continual Learning and ONNX-optimized transformers to detect web threats such as SQLi, XSS, SSRF, and OS Command Injection. The system operates under low-latency constraints while continuously adapting to evolving attacks without degrading prior knowledge. It integrates Explainable AI (XAI) for transparent decision-making and a Human-in-the-Loop feedback mechanism for continuous model refinement, creating a trustworthy, self-evolving defense.

• InnoVest — Microservices-Based Innovation Funding Platform

Jan 2025 – Jun 2025

Tools: Spring Boot, Keycloak, Kafka, Flyway, Kubernetes, Docker, ArgoCD, Prometheus, Grafana, Stripe, GCS

[GitHub Repo](#)

- Built a web-based platform connecting innovators with investors through a transparent bidding system. Streamlined the funding process via automated interest-based matching, detailed product showcases, and secure payment integration for subscriptions.

• ResQ — AI-Powered Disaster Response Coordination Platform

May 2025

Tools: LangChain, LangGraph, LangSmith, FastAPI, PostgreSQL, Firebase, GCP, Gemini, DeepEval, Tavily API

[GitHub Repo](#)

- Developed an AI-powered disaster response platform that processes multimodal inputs (text, voice, and images) to capture urgent requests and route them intelligently. Built a priority-based matching engine that assigns responders based on location, skills, and urgency, with role-specific dashboards for victims, volunteers, first responders, and government agencies to ensure coordinated, safe, and efficient disaster relief operations.

- **HealthBot+ — AI-Powered Web Application for Early Skin Disease Detection** Jul 2024 – Sep 2024
Tools: React.js, Flask, Node.js, MongoDB, Firebase, Vercel, Hugging Face, Grad-CAM, OpenAI API [GitHub Repo](#)
◦ Developed an AI-powered web application for early skin disease detection using transfer learning and Explainable AI, integrating a medical chatbot and automated reporting for accurate and transparent patient care.
- **T20-Cricket Score Predictor** Jun 2024 – Dec 2024
Tools: Python, Flask, HTML, CSS [GitHub Repo](#)
◦ Developed a web-based T20 Cricket Score Predictor using machine learning to estimate final scores based on current match data and game context.
- **Automatic Number Plate Recognition** June 2024
Tools: Python, OpenCV, Ultralytics, YOLOv8 [GitHub Repo](#)
◦ Implemented an ANPR system to detect and read license plates in video files, visualizing results with bounding boxes.
- **HR Management System** Aug 2023 – Nov 2023
Tools: Node.js, MySQL, Express.js, React [GitHub Repo](#)
◦ Developed as part of a Semester 3 group project, this full-stack HRMS featured robust database structures and key backend functionalities to manage employee data and HR operations. I led database creation and developed critical backend components, ensuring the system's effectiveness.
- **NATOURS — RESTful API for Tour Management** Jul 2024 – Jan 2025
Tools: Node.js, Express.js, MongoDB, JWT, Mongoose [GitHub Repo](#)
◦ Built a RESTful API backend for managing tour operations, including tour creation, user authentication, and booking functionalities.
- **RPAL Interpreter — Lexical Analyzer and Parser** 2023
Tools: C++ [GitHub Repo](#)
◦ As part of the Programming Languages module, developed a lexical analyzer and parser for RPAL, including AST generation and a Control Stack Environment machine for interpreting RPAL code.

PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [S.1] Yasiru Laksara and Uthayasanker Thayasivam (2025). **Enhancing Multi-Label Thoracic Disease Diagnosis with Deep Ensemble-Based Uncertainty Quantification**. Accepted for oral presentation at the 10th International Conference on Information Technology Research (ICITR 2025), University of Moratuwa, Sri Lanka.
Preprint available at: [arXiv:2511.18839](https://arxiv.org/abs/2511.18839)

SKILLS

- **Programming Languages:** Python, Java, C++
- **Web Technologies:** HTML, CSS, JavaScript, React.js, Node.js, Spring Boot, FastAPI, Flask, Streamlit
- **Database Systems:** PostgreSQL, MySQL, MongoDB
- **Data Science & Machine Learning:** NumPy, Pandas, scikit-learn, TensorFlow, Keras, OpenCV, Hugging Face Transformers, ONNX, Matplotlib, Seaborn
- **Cloud Technologies:** Google Cloud Platform, Firebase, Netlify
- **DevOps & Version Control:** Git, GitHub, Docker
- **Agentic / LLM Frameworks:** Google ADK, OpenAI SDK, LangChain, LangGraph, LangSmith, LangFuse

HONORS AND AWARDS

- **1st Place: CYPHER 2.0 Hackathon 2024** March 2024
IEEE WIE Student Branch Affinity Group of KDU 
◦ Showcased problem-solving and time management skills in a 5-hour coding challenge.
- **1st Runner-Up: IntelliHack 5.0** June 2025
IEEE Computer Society Student Branch Chapter of UCSC 
◦ Developed an agent-based system to improve disaster response coordination, competing against over 100 teams and 350+ participants.
- **2nd Runner-Up: ML Olympiad – Sustainable Urban Living** March 2024
Kaggle 
◦ Demonstrated machine learning problem-solving skills by individually developing a model to predict property habitability scores, distinguishing myself among 120+ participants.
- **2nd Runner-Up: CodeFest-2024 Datathon Competition** Jan 2025
SLIIT
◦ Applied machine learning, data analysis, and problem-solving skills throughout a 6-hour datathon challenge.
- **9th Place: HaXtreme 3.0** Oct 2024
IEEE Computer Society, University of Ruhuna 
◦ Showcased problem-solving and time management skills in a 6-hour coding challenge, excelling among 100+ competing teams.

VOLUNTEER EXPERIENCE

• Editorial Committee Member <i>Mora UXplore 2.0 – IEEE Student Branch, University of Moratuwa</i>	<i>Feb 2024 – Dec 2024</i>
• Finance Committee Member <i>M-Tutor – Maths Society, University of Moratuwa</i>	<i>Feb 2024 – Dec 2024</i>
• Editorial Committee Member <i>NEXTGEN 1.0 – IEEE Robotics & Automation Society, University of Moratuwa</i>	<i>Jan 2024 – Apr 2024</i>
• Publicity Committee Member <i>SLIoT Challenge – Department of CSE, University of Moratuwa</i>	<i>Oct 2023 – Apr 2024</i>
• Editorial Committee Member <i>MoraXtreme 8.0 – IEEE Computer Society</i>	<i>Oct 2023 – Jan 2024</i>
• Event Committee Member <i>EXMO 2023, the flagship technological exhibition of the University of Moratuwa</i>	<i>Jul 2023</i>
• Project Member <i>Shilpasara – LEO Club of the University of Moratuwa</i>	<i>Oct 2022 – Nov 2023</i>
• Organizing Committee Member <i>CSE Career Fair 2024 – Department of CSE, University of Moratuwa</i>	<i>Jan 2024</i>

PROFESSIONAL MEMBERSHIPS

• Student Member, Institution of Engineers, Sri Lanka (IESL) , Membership ID: S-30305	<i>2024 – Present</i>
• Member, IEEE Student Branch, University of Moratuwa, Sri Lanka	<i>2023 – Present</i>

CERTIFICATIONS

• Fundamentals of Deep Learning	<i>Sep 24, 2025</i>
• Certifying Body: NVIDIA	
• Machine Learning Foundations	<i>Feb 15, 2024</i>
• Certifying Body: AWS Academy	
• Supervised Machine Learning	<i>Apr 8, 2024</i>
• Certifying Body: Coursera	
• Intro to Machine Learning	<i>Jan 26, 2024</i>
• Certifying Body: Kaggle	

ADDITIONAL INFORMATION

Languages: English (Fluent), Sinhala (Native)
Interests: Sports (Athletics, Cricket), Photography

REFERENCES

- Akila Peiris**
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