MOHAMED AMRITH

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🪪 PROFILE

Self-motivated and equipped with strong fundamental knowledge, I am passionate about solving real-world problems through open-source, cutting-edge research in Artificial Intelligence and Machine Learning.

🧩 RESEARCH INTERESTS

• Large Language Models (LLMs) • Autonomous Vehicles • Computer Vision • Reinforcement Learning • Natural Language Processing • Human-Robot Interaction • Generative AI for Robotics

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💼 EXPERIENCE

AI/ML Technical Lead, *MuniLogic* ↗ — Sep 2024 – Present — Ontario, Canada (Remote)
- Architect AI workflows for business needs.
- Research and work with the Canadian government to explore generative AI use cases for local governments.

AI Engineer (Part Time), *CDAZZDEV* ↗ — Dec 2024 – Present — Mathugama, Sri Lanka
- Design and development of agents.
- Fine-tune and evaluate LLMs for computer use.
- Improve the reasoning capabilities of open-source LLMs.
- Multimodal LLMs and tools in healthcare.

AI Consultant and System Analyst, *ZDA Fashion* ↗ — May 2023 – Aug 2024 — Riyadh, Saudi Arabia
- Researched and implemented AI technologies for the fashion industry, including image-based search and AI-driven dress fitting.

Machine Learning Research Engineer, *Drenlo* ↗ — Dec 2022 – Jan 2023 — Australia (Remote)
- Implement generative AI for NLP tasks with an advanced RAG system.
- Advanced AI search on large-scale databases for enterprise solutions.
- Research on advanced human reasoning in LLM models.
- Customized model solutions from data collection to model deployment.

Robotics Engineer (Intern), *Scicom Infrastructure Services* ↗ — Jun 2021 – Jan 2022 — Atlanta, United States (Remote)
- Autonomous robots.
- Integrating advanced computer vision models and large AI language models (LLMs) into robots.
- Design, develop, and deploy robotics applications using AWS RoboMaker. Leverage ROS, cloud-based simulations, AI/ML integration, IoT connectivity, and security best practices to optimize performance, scalability, and automation.

🎓 EDUCATION

B.Eng. Tec (Hons) in Instrumentation And Automation Engineering, *University of Colombo* — Feb 2017 – Aug 2022 — Srilanka
GPA: 3.4 (Second Upper Class)

GCE Advanced Level, *Kattankudy Central Collage, Batticaloa, Sri Lanka* — Feb 2016 — Z - Score: 3.42
High Distrinction Science for technology, Engineering technology and ICT
District Rank : 1, National Rank : 5 (out of ~ 35, 000 candidates)

MOOCs
Self-Driving Cars Specialization (on Coursera), DeepLearning.AI ↗ TensorFlow Developer Specialization (on Coursera), IBM AI Engineering Specialization (on Coursera)

🧠 SKILLS

AI and Machine Learning: NLP, Computer Vision, LLMs, Reinforcement Learning.
Robotics: AWS Robomaker, Sensor Fusion, ROS
Data Science: Data Collection, Data Cleaning, Data Analysis, Model Development
Languages: Python, C++, C, MATLAB
Microcontrollers: Atmega, PIC, FPGA, Microchip Studio, Proteus
ML Frameworks: PyTorch, Tensorflow, Keras
Clout Computing: AWS (EC2, S3), Microsoft Azure (VM), GCP
Utilities: PyCharm, VSCode, Git

📁 PROJECTS

Healthelic ↗
Multimodal-Based Healthcare Assistant AI

Computer Use - UI TARS ↗
This fine-tuned UI-TARS model is trained on the OS-ATLAS Windows dataset for GUI grounding tasks.

Self driving car prototype using machine learning algorithm. ↗
Developed path planning, obstacle identification and avoidance, sign and traffic lights detection using computer vision and sensor fusion algorithms on Raspberry Pi.

Skin Cancer Detection Segmentation ↗
Implemented a system for skin cancer detection, classification, and segmentation based on the HAM10000 and ISIC dataset archives.

Robot Arm Control both mobile application and desktop application. ↗
Created a 6 DOF 3D printed robot arm controlled via Wi-Fi, Bluetooth, and Serial communications using Arduino.

Face recognition based attendance system ↗
Utilized Caffe and PyTorch frameworks for feature detection and extraction, converting features into blob files, with detailed code explanations.

📰 PUBLICATIONS

Design And Implementation Of Intelligent Crowd Monitoring System, *ResearchGate* ↗   Jun 2021

Local Planning of an Autonomous Driving Car Prototype, *ResearchGate* ↗   Dec 2023
Conference: 2023 8th International Conference on Information Technology Research (ICITR)

🔗 VOLUNTEERING AND PROFESSIONAL SERVICES

Student Representative
• Department of Instrumentation and Automation Engineering.

Coordinator
• Robotics Club, Faculty of Technology

🔁 REFEREES

1. Dr. Darshana Perera
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