SAMITH CHATHURANGA

CONTACT

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CAREER OBJECTIVE

To lead automation initiatives by leveraging my expertise in AI, IoT, and system integration, driving efficiency and delivering innovative solutions that align with organizational goals.

ACADEMICS

B.Sc Applied Science
Wayamba University of Sri Lanka

Embedded Machine Learning for Edge Computing
University of Moratuwa | ENTC

Embedded Product Design for IoT
University of Moratuwa | ENTC

Certificate in Project Management
Global Eye International

DevOps Training
Simplilearn

Building Real-World Applications With LLMs
Udacity

Build a Neo4j-backed Chatbot using Python
Neo4j

G.C.E. O/L & A/L (Combined Mathematics)
Ananda College, Colombo 10

WORK EXPERIENCE

EMBEDDED ENGINEER - AI
IPD COLOMBO PVT.LTD
Sep 2022 - Present

- Developed RAG based chatbots to boost productivity, using cutting-edge LLMs and AI tools.
- Designed front-end applications for Building Management Systems (BMS) using React, DGLux5, Node-Red, and Skyspark.
- Designed production-level Azure AI applications that enhanced operational processes and efficiency.

ELECTRONICS ENGINEER
HITECH SOLUTIONS PVT. LTD
June 2016 - June 2022

- Optimized vision-based width and length measuring software, enhancing precision and operational efficiency.
- Led cross-functional teams to design and deploy custom industrial automation solutions, ensuring on-time delivery and client satisfaction.
- Delivered end-to-end automation for:
  - Fabric relaxing, inspection, and cutting machines
  - Automatic tire cutting machines
  - Automatic wrapping systems
  - Gantry cranes, conveyor systems, and goods hoists
  - Gate barriers, parking systems, and wire-checking machines
  - IoT-based data monitoring systems for real-time operational insights
- Integrated vision-based guidance systems for AGVs, streamlining industrial workflows with innovative automation technologies.
- Collaborated with stakeholders to install, commission, and optimize automation solutions, ensuring efficiency and risk mitigation.
- Provided technical leadership, resolving maintenance challenges and guiding teams in product development and troubleshooting.
- Successfully executed international projects across India, Bangladesh, Ethiopia, Cambodia, China, and the Philippines, driving global automation initiatives.
- Represented Sri Lanka Electronic Manufacturers and Exporters Association (SLEMEA) as a delegate in Vietnam and Thailand, strengthening international partnerships.

ACHIEVEMENTS

FAS Awards 2016 - WUSL
In recognition of the valuable contribution made to National | Social | Institutional development during the Undergraduate period

Champions - SAITM Robotics Challenge 2015
All island Robotics Competition

Champions - Technosoft 2015 Robotics Competition
All island Robotics Competition

1st Runner up - IESL RoboGames 2015
All island Robotics Competition

5th place - FASBOT Robotics Competition 2013
Wayamba University of Sri Lanka

Among Top 17 Teams - OpenAI Hackathon 2024
Hatch Works & Veraciy Group

Among Top 20 Teams - IEEE IES Generative AI Hackathon 2024
IEEE Industrial Electronics Society

Ranked 23rd - ACES CODERS 2015
All Island Programming Competition

Ranked 772 (World) & 129 (Sri Lanka)- IEEEXtreme 9.0 Programming Competition 2015

SPORTS

Champions - Fresher's Table Tennis tournament 2013
Wayamba University of Sri Lanka

Champions - Inter Faculty Table Tennis tournament 2015
Wayamba University of Sri Lanka

1st Runner up - Inter Faculty Table Tennis tournament 2014.
Wayamba University of Sri Lanka

1st Runner up - Fresher's Carrom tournament 2013.
Wayamba University of Sri Lanka

PROJECTS

Intelicart - AI Powered E-commerce Platform
Transforming E-commerce Search Using Open-Source LLMs and CLIP-Powered Multi-model Architecture.

High capacity heavy-duty continues shaking incubator for bacterial growth
Chemical shaking device with speed and temperature control used in molecular plantation for the Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Colombo.

Autonomous Robots
Designed and developed various task-oriented autonomous robots for all island robotics competitions.
(Included capabilities: Object detection and manipulation, Grid navigation, Color detection, Volume measuring, Maze solving, and any given specific tasks)

Carrom Scoring and Judging Framework
Computer vision-based automated system is to give an unbiased result for the game and support and help to carry out the duty assigned for judges

Low cost pump to regulate delivery of drug infusion
A machine which can gradually administer intravenous medications to patients.

Fully autonomous face tracking and task oriented Humanoid Robot.

SKILLS & EXPERTISE

AI and Machine Learning
- TensorFlow
- PyTorch
- LangChain
- Neo4j
- Pinecone

Programming / Scripting Languages
- MicroC
- C /C++
- Java
- MySQL
- JavaScript
- Arduino
- React
- Python

PLC/HMI Programming
- Xinje PLC & HMI
- Omron PLC
- Mitsubishi PLC
- Unitronics PLC & HMI
- Samkoon HMI

Hardware Design & Other Tools
- Eagle CAD
- KiCAD
- Proteus
- DGLux5
- Onshape
- QT Creator
- OpenCV

Version Control
- GitHub
- Azure DevOps
- Git

INTERESTS

- **Robotics**
- **Cricket**
- **AI**
- **Blockchain Technology**

REFERENCES

- **Prof. L.D.R.D. Perera**
  Dean, Faculty of Applied Sciences,
  Wayamba University of Sri Lanka
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  Email: perera_ldrd@yahoo.com

- **Maduka Ashan Perera**
  Associate Tech Lead,
  OKLO Private Limited
  Mobile: +94 71 643 5056
  Email: maduka.ashan@gmail.com

VOLUNTEERING, SPORTS & OTHER EXPERIENCES

Vice-Chairman - IEEE Young Professional Sri Lanka 2018

Founding Chairman - IEEE Wayamba University of Sri Lanka Student Branch

Delegate - Representing Sri Lanka
IEEE Region 10 (Asia-Pacific) Student | Young Professionals | Women in Engineering Congress 2016 at Hydrabad India

Member of Publicity & Social Media Committee
IEEE Region10 (Asia-Pacific) Student | Young Professional | Women in Engineering Congress 2015 at Colombo Sri Lanka

Leader of Publicity & Social Media Committee
IEEE Sri Lanka Student | Young Professional | Women in Engineering Congress 2015 at University of Peradeniya.

Student Ambassador - Microsoft Sri Lanka

Member of Technical Committee
WinC (Wayamba International Conference 2014) at Wayamba University of Sri Lanka.

Member of Technical Committee
ASTRITE (Annual Symposium of Department of Electronics) at Wayamba University of Sri Lanka.

Treasurer of Mathematical Society (2014/2015).
Wayamba University of Sri Lanka

Participated to IEEE Electronics Design Competition 2014, 2015 and 2016

Participated to IEEEmadC Mobile Application Development Competition 2014.

Vice-Captain - Table Tennis Team (2014/2015).
Wayamba University of Sri Lanka

Participated 10th UiTM International Sports Fiesta 2015 in ShahAlam, Malaysia

Participated Inter University Table Tennis tournament 2014, 2015 and other All Island Table Tennis Tournaments.

Participated Carrom Federation tournaments representing University Carrom team.