

# Subhasinghe Gamage Sahas Eashan

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## Personal Statement

Undergraduate pursuing **Electronic and Telecommunications Engineering** at University of Moratuwa. Passionate about **robotics, AI/ML, and embedded systems**. Competitive programming enthusiast with proven track record in robotics competitions and hackathons.

## Education

<b>2023 - 2027</b>	<b>B.Sc. Electronic and Telecommunications Engineering</b> , University of Moratuwa Circuits and Signals, Communication Systems, Robotics Design, Computer Organization, Methods of Mathematics	<b>CGPA: 3.92/4.0</b>
<b>2013 - 2022</b>	Secondary Education, Richmond College, Sri Lanka A/L Results: Combined Mathematics (A), Physics (A), Chemistry (A)	<b>Z-score: 2.21</b>

## Professional Experience

### Research Associate

*Roboticgen Labs*

*January 2025 - Present*

Contributing to the research and development of robotic solutions, focusing on **PCB design** and hardware/software troubleshooting.

### Robotics Team Member

*External Team under Roboticgen Labs*

*September 2024 - March 2025*

Participating in the design, implementation, and testing of robotic systems for competitions and external projects.

## Projects

**RoboGames 2024 – University Category (2nd Runners-Up)** — [GitHub](#). Autonomous robot with **Raspberry Pi 5**, **Kobuki base**, **Kinect sensor**. Implemented maze navigation, survivor rescue, object manipulation using **computer vision**, **HSV color tracking**, **multithreaded control**.

**Omni-Directional Robot** — [GitHub](#). Mecanum wheel robot with **embedded control systems**, **sensor integration**, **autonomous navigation**. Part of Engineering Design Realization module.

**Agentic AI Practice** — [GitHub](#). Intelligent AI agent systems including **web search and finance agents**, **multi-agent collaboration**, **PDF processing** using advanced NLP.

**ESP32 Medibox Simulation** — [GitHub](#). **ESP32-based** medicine reminder system with environmental monitoring, **IoT connectivity**, **push notifications**.

**MicroMouse V1 2023** — [GitHub](#). Autonomous maze-solving robot with **flood-fill algorithms**, **pathfinding**, **real-time mapping**.

**FastLine Follower** — [GitHub](#). High-speed line following robot with **PID control**, **sensor arrays**, **dynamic speed adjustment**.

**Linear Power Supply Design** — Precision 10V, 10A supply with **voltage regulation**, **current limiting**, **thermal management**, **double-layer PCB design**.

## Skills

• Python	• React	• Computer Vision	• STM32	• STM Cube IDE
• C/C++	• HTML/CSS	• Agentic AI	• FPGA	• Git
• MATLAB	• Node.js	• Machine Learning	• Altium Designer	• LaTeX
• MicroPython	• TensorFlow	• Arduino	• SolidWorks	• MATLAB Simulink
• Verilog HDL	• Scikit-learn	• ESP32	• LTSpice	• SDK Development
• JavaScript	• OpenCV	• Raspberry Pi	• Arduino IDE	

## Certifications

### Mathematics for Machine Learning Specialization

*Imperial College London, Dec 2024*

Relevant Coursework: Linear Algebra, Multivariate Calculus, Principal Component Analysis (PCA).

### Deep Learning Specialization

*DeepLearning.AI, Jun 2024*

Relevant Coursework: Regression and Classification, Advanced Learning Algorithms, Unsupervised Learning, Recommenders, Reinforcement Learning (ongoing).

### Embedded Systems and AI Courses

*University of California, Irvine*

Relevant Coursework: The Raspberry Pi Platform and Python Programming, Interfacing with the Arduino, The Arduino Platform and C Programming.

## Achievements & Awards

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### Major Awards:

- **Finalist – PLEASE Hack 2025** — Top finalist representing Sri Lanka
- **2nd Runners-up – IESL RoboGames** (University Category) — Autonomous robot with computer vision
- **Winner – Insighture Hackathon 2025** — AI-powered virtual real estate assistant
- **1st Runner-up – CodeRally 5.0** — Competitive programming team leader
- **Best Environment Project** — Tyumen State University, Russia

**Competition Finalists:** Codex 2025, CodeSprintX (IIT), AlgoExplore, MoraXtreme 9.0, Robofest (Micromouse), Dextron (Fast Line Following), 15th place XTREME Encode 2024

**Academic:** Bronze Medalist - Sri Lankan Mathematics Olympiad 2014, Dean's List (4 semesters) - University of Moratuwa

## Leadership

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<b>Vice Secretary</b>	IEEE RAS (University of Moratuwa)	Jan 2025 - Present
<b>Matching Manager IGV</b>	AIESEC Colombo South	Jan 2024 - Jun 2024
<b>Team Leader</b>	Educational Team of M-Pirates (MoraMaths)	Feb 2024 - Jun 2024
<b>Co-Chair</b>	Mora Battle Bots (IEEE RAS)	Mar 2025 - Present
<b>Co-Chair</b>	Robotics Day (IEEE)	Mar 2025 - Apr 2025
<b>Assistant Pillar Head</b>	Public Relations (Mora Esports)	May 2024 - Present

## Extra Curricular Activities

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<b>Committee Member (Operations)</b>	Electronic Club University of Moratuwa.	Jun 2024 - Present
<b>Volunteer Management Committee</b>	IEEE Student Branch University of Moratuwa.	Jan 2025 - Present

## Professional Affiliations

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**IEEE Member** — Institute of Electrical and Electronics Engineers

## References

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### Prof. Rohan Munasinghe, Ph.D.

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