Nimesh Herath
Mechatronics Engineer (UG)

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🌐 www.nimeshherath.info
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As a highly motivated undergraduate in Mechatronics Engineering with a robust academic background and basic experience in automation systems, electronics, and artificial intelligence, including image recognition, I am actively seeking an entry-level position where I can leverage my foundational knowledge in mechatronics engineering to contribute to the advancement of cutting-edge technologies. I am enthusiastic about collaborating with cross-functional teams to integrate cutting-edge electronic, mechanical, and machine learning solutions into automation systems. Additionally, I have a passion for game development and am eager to explore opportunities in this field too, applying my creativity and technical skills to contribute to the creation of immersive gaming experiences.

EDUCATION

Govt. Science College, Matale *(February 02, 2014 - August 30, 2018)*
GCE Advanced Level, Physical Science
Member - Media Unit (2014-2018), Member - IT Society (2014-2018)

SLTC Research University *(March 20, 2021 - Present)*
Mechatronics Engineering, Undergraduate
Member - SEDS SLTC (2021-2023)

PROJECTS

Oultlaw's Redemption
An Android game developed using the Unity Engine features AI behavior trees for enemy controls, incorporates animal riding systems, and offers shooting capabilities. It is available on the Play Store.
🔗 https://play.google.com/store/apps/details?id=com.ignitivegames.OutlawRedemtion

Line following and obstacle avoidance robot
A Line Following Robot incorporates a 5-sensor IR array for precise black line detection and integrates 3 sonar sensors to identify obstacles. Utilizing a PIC microcontroller, implements PID control algorithms to ensure superior movement stability

Plant Health Monitoring and Care System
The Plant Health Monitoring system employs a camera mounted on a mobile robot, equipped with fertilizer tanks, and powered by a Raspberry Pi 5. Using Keras and TensorFlow, the system detects plant diseases and spray fertilizers accordingly.

Automatic License Plate Recognition
Utilizing a Raspberry Pi 4 along with a Raspberry Pi camera, we detect vehicle number plates via the camera and accurately identify them using a pre-trained YOLOv8 model, used Python for programming

Toon Tank Online
A multiplayer Android free-for-all tank battle game, incorporating netcode, is developed using the Unity engine, with 3D models designed using Blender.
🔗 https://play.google.com/store/apps/details?id=com.ignitivegames.ToonTankOnline

Past Papers Srilanka
Past Papers App has been developed using Android Studio. In this app users can get Advance level past papers and model papers from 2010 to 2023, also teachers can register, and students can request classes from them. The app uses Firebase for student and teacher registrations.

CERTIFICATIONS

Google IT Automation with Python
Google

Course 1: Crash Course on Python
Course 2: Using Python to Interact with the Operating System
Course 3: Introduction to Git and GitHub
Course 4: Troubleshooting and Debugging Techniques
Course 5: Configuration Management and the Cloud
Course 6: Automating Real-World Tasks with Python

Learning Industrial Automation
LinkedIn

Learn about the components and networks involved at each level of automation: field level, control level, and management level. Explore the different devices involved, from the programmable logic controllers (PLCs), to OPC software that give technicians insights into operations

Computer Vision on the Raspberry Pi 4
LinkedIn

how to write and execute computer vision applications on the Raspberry Pi 4 using the Thonny IDE, the OpenCV library, and NumPy array operations

SOLIDWORKS: Design for Mechatronics
LinkedIn

basics of mechatronic design in SOLIDWORKS, walking through a complete project for robotic arm

Introduction to Robotics with Webots Specialization
Cousera

VOLUNTEER EXPERIENCE

TechnoMind
Team Head - Design Team
Organized 2 day Robotics Exhibition and Competition for School and University Students

Vision
Team Member
Introducing mini transplant machine to improve rural agrculture

SKILLS

SolidWorks	Matlab	Unity Game Engine
●●●●●	●●●●●	●●●●●
C# Programming	**Python Programming**	**Industrial Automation**
●●●●●	●●●●○	●●●●○
Machine Learning	**Proteus Design Suite**	**MPLAB X IDE**
●●●●○	●●●●○	●●●●○
Microsoft Office	**Blender**	**Unreal Engine**
●●●●○	●●●○○	●●●○○

INTERESTS

Embedded Systems	Industrial Automation	Game Development
Machine Learning and Artificial Intelligence	Renewable Energy and Technologies	3D Printing/Additive Manufacturing
Application Development	Robotics	

LANGUAGES

English
Fluent

Sinhala
Expert

REFERENCES

N.S.K Samarasinghe
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