

H.K. Pavan Thenushka

Undergraduate, Mechanical Engineering

📍 Matara, Southern Province, Sri Lanka

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👤 Pavan Thenushka

About Me

I am an undergraduate Mechanical Engineering student at the University of Moratuwa. I'm passionate about applying core engineering principles to solve real-world problems. My studies have covered areas such as design, manufacturing, thermodynamics, and automation. I enjoy both independent and team-based work, especially when it involves learning through challenges. I'm eager to gain hands-on experience, grow as a professional, and contribute to practical, impactful solutions in the field of engineering.

Education

University of Moratuwa - Faculty of Engineering
Bachelor of Science Honors in Mechanical Engineering
CGPA: 3.34/4.00

Katubedda, Moratuwa, Sri Lanka
2023 March - present

St. Thomas Boys' College
GCE A/L 2021 (First Attempt) - Physical Science
Z-Score: 2.0921

Matara, Sri Lanka
2019 – 2022

Projects

Design and Manufacturing

Reverse Engineering Motorbike Side Mirror
Performed material tests and designed mirror glass using SolidWorks, analyzing stress and displacement. Explored manufacturing process to enhance performance.
Technologies: SolidWorks, Material Testing , Reverse engineering methodologies, Technical reporting , teamwork

2025 Feb – 2025 June
LinkedIn Post ↗

Gearbox Design for Manual Brick Press Machine (Ongoing)
Ongoing project designing a gearbox for a manual brick press to enhance efficiency and durability; developed 3D models and design iterations in SolidEdge, optimizing torque transmission, and currently finalizing full assembly for application.
Technologies: SolidEdge, Gear Design, Mechanical Analysis

Multi-Tasking Kitchen Table
Designed and fabricated a versatile kitchen table with cutting surface, equipment hangers, and barbecue section. Combined woodworking, welding, and sheet metal techniques.
Technologies: Woodworking, welding, sheet metal fabrication.

2024 Feb – 2024 June
LinkedIn Post ↗

Automation

Automated Rice Weighing & Packing Machine
Developed a mechatronic system for automated rice dispensing and packing. Integrated IR sensors for bag detection, screw agitators for controlled flow, and GSM for low-supply alerts.
Technologies: Arduino Mega/Uno, IR/ultrasonic sensors, GSM module.

2024 Feb – 2024 June
LinkedIn Post ↗

Industrial

Problem Analysis & Process Optimization – Pasgoda Tea Factory (Ongoing)

Analyzing tea production to address inefficiencies in automation, energy use, and safety; proposing automated packaging, real-time moisture control, efficient boilers, and improved worker safety.

Technologies: Process optimization, industrial safety, lean manufacturing, sustainability, teamwork

Embedded

Smart Medibox with Environmental Control

Built an ESP32-based system for medication management with environmental monitoring, automated shading, reminders, and Node-RED visualization.

Technologies: ESP32, LDR, Servo, MQTT, Node-RED

2025 Jan – 2025 June
Wokwi Simulation ↗

Skills

Technical Skills

- AutoCAD, SOLIDWORKS (3D Modelling and Assembly)
- Arduino, PLC Programming
- Basic Finite Element Analysis (ANSYS)
- MATLAB ↗
- 3D Printing ↗
- Computational Fluid Dynamics (CFD)

Soft Skills

- Problem-solving
- Engineering Project Management ↗
- Teamwork and collaboration
- Time management

Languages

- English •
- Sinhala ••••

Organizations

IMechE Affiliate Member (Member No : 80788035)

2025 Jan – present

Institution of Mechanical Engineers (IMechE), Sri Lanka Branch

IESL Student Chapter - Member (Member No : S-33267)

2025 Sep – present

Institution of Engineers, Sri Lanka (IESL)

Volunteering Experience

Esports Club - Member , University of Moratuwa

2024 Jan – present

Contribution: Active member of the E sports Club at University of Moratuwa, organizing in events and activities.

IEEE Power Electronics Society Student Branch Chapter - Design Committee Member

2024 Jan – 2025 Dec

University of Moratuwa ;Contribution: Participated in sessions and carried out design works

IEEE Robotics and Automation Society - Design Committee Member

2024 Jan – 2024 Dec

University of Moratuwa

Contribution: Participated in workshops and sessions, and carried out design work.

References

Dr. Lihil U. Subasinghe | PhD (SG), BSc Eng Hons (SL), AMIMechE, AMIE(SL)

Industrial Training Coordinator / Senior Lecturer, Department of Mechanical Engineering

Email: lihils@uom.lk ↗ Phone: +94 71 6091050 ↗

Prof. Dassanayake V.P.C | BSc Eng (Moratuwa), PhD (Saga, Japan), CEng, MIE (SL)

Mechatronic Systems, Department of Mechanical Engineering, Faculty of Engineering, University of Moratuwa

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