

THIWANKA ALAHAKOON

Mr.

Mechanical Engineer,
Specialize in Mechatronics.



Enthusiastic mechanical engineering fresh graduate with a passion for design, modeling, and turning theories into reality. Eager to handle a high workload and excel in a fast-paced environment.

Personal info

+94-76-460-3427
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Links

www.github.com/tettolizer
www.linkedin.com/in/thiwanka-ala/

Skills

C, Python, R
LaTeX, HTML
SolidWorks, Autocad, Adobe Eagle, Ansys, Matlab, Arduino, Photoshop, FluidSIM, MS Office, MS Project

Organizations

- › Institution of Engineers, Sri Lanka (IESL) (IESL Membership No. S-27193)
- › Institution of Mechanical Engineers (IMechE) (IMechE Membership No. 80526913)
- › Mechanical Engineering Society, University of Peradeniya

WORK EXPERIENCE

MAS Intimates, Ratmalana

Full-time, Automation Engineer Trainee

JAN 2022 – JUNE 2022

- Improved practical skills and expanded knowledge of engineering principles including 3D modelling, Arduino programming.
- Gained insights into Design for Manufacturing and Assembly.
- Enhanced practical skills and learned to apply academic concepts to real-world industrial problems.

Mechanical Engineering Department, University of Peradeniya

Part-time, Casual Instructor

OCT 2023 – PRESENT

- Supervised 3 hour sessions on ME220 - Design and Innovation which conduct 3d modeling (Solidworks) and Conceptual project designing.
- Supervised 2 hour sessions on ME515 - Mechatronics labs on PLC, Pneumatic, Arduino, Image Processing, PLC, Labview softwares and knowledge areas.

EDUCATION

Mechanical Engineering (Specialization in Mechatronics), University of Peradeniya

PERADENIYA, SRI LANKA NOV 2018 – DEC 2023

Degree: BSC in Mechanical Engineering

Gpa: 3.0 / 4.0

Specialization: Mechatronics

Course content : Digital Design, Engineering Design and Innovation, Differential Equations, Programming Methodology, Control systems, Embedded Systems, Probability and statistics, Mechatronic System Lab etc.

RESEARCH

Design optimization of Origami-inspired airbags for landing and crash protection

UNIVERSITY OF PERADENIYA 03/2023 - PRESENT

Final year Research Project - Recognizing origami folding patterns and how they contribute to increased occupant safety.

CAN Bus Data Visualization Tool

UNIVERSITY OF PERADENIYA 10/2022 02/2023

3rd year Group Project - Recognize the basic CAN bus signals. Visualize the CAN bus's data. How to use the CAN shield for Arduino

PROJECTS

Programming FPGA for MPSOC Design

UNIVERSITY OF PERADENIYA 10/2022 01/2023

Quartus II and Nios II software build tools are used to program the FPGA to create basic systems on chips, modify the CPU, and create multiprocessor systems on chips.

Cassette Clamp Reverse Engineering

MAS INTIMATES (PVT) LTD.- RATMALANA 03/2022 05/2022

Redesigned & molded using Solidworks and made the existing product with low cost.

3D-Printed Sewing Nozzle Attachment

MAS INTIMATES (PVT) LTD.- RATMALANA 03/2022 04/2022

Designed and fabricated a 3D-printed sewing machine attachment integrating CAD design using SolidWorks and an Ultimaker 3D printer to streamline garment sewing.

Powder Coating Enclosure Design and Fabrication

MAS INTIMATES (PVT) LTD.- RATMALANA 01/2022 02/2022

Designed and built an innovative powder coating enclosure to enhance safety and cleanliness in the workshop, using SolidWorks, featuring sandblaster-inspired design. Constructed the enclosure with incorporating manufacturing techniques such as CNC, Laser-cut perspex, Profile-bar assembly.

Game Jumping Jack - C Programming

UNIVERSITY OF PERADENIYA 09/2021 - 10/2021

Third year project of game using Arduino and C coding. The project's main objectives include handling interrupts in the AtMega328P microcontroller, serial connection, saving data in EEPROM, and utilizing sensors.

ACHIEVEMENTS

- 2023 IESL Student Chapter Cad Eager 3d Modeling Competition — Participation
- 2017 Sri Lankan Mathematics Olympiad — High Distinction
- 2016 Australian National Chemistry Quiz Senior Division — High Distinction
- 2016 Sri Lankan Mathematics Olympiad Sri Lanka — High Distinction
- 2014 Australian National Chemistry Quiz Junior Division — High Distinction
- 2014 Sri Lankan Mathematics Olympiad — High Distinction

EXTRA CURRICULAR

Sri Lankan University Games - Hockey

CHAMPIONS 2023 & 2019

Colors Night, University Of Peradeniya

UNIVERSITY COLORS - HOCKEY 2022, 2023

UNIVERSITY HALF COLORS - HOCKEY 2019

Inter University Games - Hockey

2 ND RUNNERS-UP 2022

VOLUNTEERING

Rotaract Club, University of Peradeniya

PERADENIYA, SRI LANKA JUN 2019 – JUN 2022

Member

Foundation Of Astronomical Studies And Explorations (FASE)

KANDY, SRI LANKA OCT 2017 – PRESENT

Member, Editor, Vice President, Advisory Board Member

Arunella Social Service Project

PERADENIYA, SRI LANKA JAN 2019 – NOV 2023

Member

REFERENCES

Prof S.D.G.S.P.Gunawardene

Senior Lecturer / Professor

Department of Mechanical Engineering

University of Peradeniya.

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