



Shehan Madhusanka

Mechanical Engineering (U.G.) | Aeronautical Stream

I am a mechanical engineering student specialising in the aeronautical engineering stream with a foundation in design, analysis, and problem-solving. Skilled in engineering simulations, product development, and technical software. Passionate about innovation and continuously expanding expertise through hands-on projects and practical applications.

PERSONAL DETAILS

Name with initials: H.S.S.M. Hewawasam

Address: No.166 Dagonna, Via Negombo

Date of birth: 2000.12.11

Gender: Male

Marital Status: Unmarried

Nationality: Sri Lankan

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CONTACT

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LINKEDIN

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COMMUNICATION

English

Sinhala

INTEREST

Aerodynamics

Mechanical Engineering design

Manufacturing Technologies

Industrial Engineering

Energy Management

Turbo Machinery

EDUCATION

Faculty of Engineering, University of Moratuwa, Katubedda, Sri Lanka

B.Sc. [Hons] Mechanical Engineering (U.G.) | Aeronautical Stream

2021 - Present

Completed the Intermediate Level in English Language

Regent language school

2019

Harishchandra National College, Negombo, Sri Lanka

G.C.E. Advanced Level Examination

Subject stream: Physical science , Z score :2.2296, Results:3A's

G.C.E. Ordinary Level Examination

Results: A-6 , B-2 , C-1

WORK EXPERIENCE

Trainee Mechanical Engineer at Sri Lankan Airlines

Aircraft Maintenance| Engineering Planning| Technical Services
(2023 Dec - 2024 Feb)

Trainee Mechanical Engineer at Sri Lanka Air Force

Aircraft Maintenance| Non-destructive Testing
(2024 Mar - 2024 May)

EXTRA-CURRICULAR ACTIVITIES

IMechE Student's Chapter, UOM

2022 - present

EXMO- Demonstrator

2023

Volunteer in Soyuru sathkara O/L mathematics tutoring

2023

Volunteer in Beyond Boundaries

2025

RELEVANT SKILLS

Teamwork
Project and Time Management
Presentation Skills
Leadership Potential
Technological Proficiency
Quick Learning

REFERENCES

Dr. Nalaka Samaraweera
Senior Lecturer,
Department of Mechanical
Engineering,
University of Moratuwa,
Sri Lanka.
PhD (University of Auckland)
MSc (University of Moratuwa)
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Dr. Pasan Henadeera
Senior Lecturer,
Department of Mechanical
Engineering,
University of Moratuwa,
Sri Lanka.
PhD (University of Moratuwa)
BSc Eng (KDU)
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TECHNICAL SKILLS

Solid Works
Solid Edge
Auto CAD
Ansys Fluent
Arduino
Microsoft office
Qblade

PROJECTS

Static and Dynamic Structural analysis of Small- Scale Wind Turbine Blades

Final Year Group Project : (2024 Jun - Present)

The ongoing project is focused on designing and developing a small-scale wind turbine with optimized aerodynamic efficiency and structural integrity. Involves design calculations, aerodynamics analysis, manufacturing using glass fiber composites, documentation, and presentations.

CFD Analysis of Airfoil at Various Angles of Attack

2024 Sep - 2023 Oct

Conducted a CFD analysis of a wind turbine aerofoil (NACA 0012) at various angles of attack to evaluate aerodynamic efficiency while maintaining a constant Reynolds number. Utilized Ansys-Fluent for flow simulations, incorporating steady-state, incompressible, and two-dimensional analysis with the Realizable k- ϵ turbulence model. Defined the flow domain, generated a structured computational mesh, and optimized simulation settings for accurate results

Propeller design project

2024 Sep – 2024 Oct

Designed a fixed-pitch propeller using the NACA 0009 aerofoil for optimal aerodynamic performance. Developed specifications for a 1500 kg aircraft, ensuring efficient takeoff at 220 km/h within a 1 km runway. Conducted performance calculations using Excel/MATLAB, considering thrust, engine power, and aerodynamic drag. Ensured subsonic blade tip speeds and optimized the hub-to-tip ratio. Created a detailed 3D model in SOLIDWORKS for further analysis and development

C-Check Forecasting for A330 & A320 Family Fleet

Aviation Maintenance Planning Project – SriLankan Engineering

During my internship at SriLankan Airlines, contributing to the planning of C-Checks for A330 and A320 aircraft for 2024-2025. Focused on optimizing maintenance schedules to enhance efficiency, minimize downtime, and ensure regulatory compliance. Gained hands-on experience in aircraft maintenance planning, data analysis, and decision-making within airline engineering and operations.

Gearbox Designing Project

2023 Aug – 2023 Nov

Developed a gearbox to optimize motor speed and torque for a sledgehammer application. Conducted background research, design calculations, and material selection, ensuring durability and performance under dynamic loads. Designed and selected gears, pulleys, shafts, and bearings for efficiency and strength. Documented the process with detailed tables and figures to support heavy-duty blacksmithing operations