KUSAL SOMARATHNA

MECHANICAL ENGINEER

About me

A hardworking, enthusiastic mechanical engineer undergraduate with exceptional interpersonal skills who is confident on facing new challenges where I can apply my expertise and broaden my knowledge whenever I can

Contact

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Technical Skills

- **Engineering software**
  - **Solidworks**
  - **Ansys - Structural, Fluent**
  - **Solid Edge**
  - **AUTOCAD**
  - **Matlab**
  - **Simscale**
- **Programming languages**
  - **Python**
  - **C++**
- **Other**
  - **Microsoft Office**

Work Experience

Aircraft Engineering Wing - Sri Lanka Air Force

2022 March - 2022 May

Gained hands-on experience in the repair and overhaul procedures of Bell 212, 412, 206, and MI 17 helicopters.

- Performed a weight and balance operation on Bell 412 aircraft.

Aircraft Overhaul Wing - Sri Lanka Air Force

2022 June - 2022 August

Gained hands-on experience in the repair and overhaul procedures of Y 12, F 7 GS/BS, K-8, and PT 6 aircraft.

- Created a repair and overhaul procedure for the backup fuel relay box of K-8 aircraft.
- Created a repair and overhaul procedure for the power juction box of K-8 aircraft.

Education

Faculty of Engineering - University of Moratuwa

2018 - 2023

BSc. Eng. (Hons) in Mechanical Engineering (Specialized in Aeronautical)

Second-class Upper Division (CGPA: 3.57)

Ananda College

2009 - 2017

GCE A/L (2017): Physical Science Stream

3A's (Z Score: 2.0880)

Projects

Development of Computational and Experimental Framework for Small-scale Wind Turbines

Research project - Final year

Developing a computational framework to evaluate the wind turbine performance and to obtain the optimum wind turbine blade design for given conditions.

CFD Analysis for Micro-scale Wind Turbine

Computational Fluid Dynamics Project

Conducted a computational fluid dynamic analysis on a micro-scale wind turbine performance and validated using experimental data.

Soft Skills

- **Teamwork**
- **Adaptability**
- **Work under pressure**
- **Analytical thinking**
- **Quick learning**
- **Communication skills**
- **Leadership**

Languages

- **English - Working proficiency**
- **Sinhala - Native proficiency**

Reverse Engineering of Aircraft Parts Using FAROARM

Aircraft Materials and Manufacturing Project

Reverse engineer an aircraft engine turbine blade using a coordinate measurements machine, develop the 3-D model, and propose a suitable manufacturing method.

Designing a Gearbox for a Towing Truck

Machine Design Project

Designing a sliding mesh type gearbox for a towing truck used in railway stations for luggage transportation.

FEA Analysis for Aircraft Wing Loading

Aircraft Structures and Design Project

Conducted a finite element analysis on Bombardier Global 8000 aircraft for wing loading conditions and determined a suitable mounting location for landing gears on the wing.

Reverse Engineering of a Table Lamp

Manufacturing Engineering Project

Reverse engineer a table lamp, create the 3-D model, and analyze and propose a suitable manufacturing method for each component.

Extra-curricular Activities

FalconE Racing

- Cooling System - Engineer (2022-2023)

Mora Avions

- Propulsion System - Engineer (2021-2022)

Football

- University of Moratuwa - Captain (2022)
- Ananda College - Member (2009-2016)

Achievements

FalconE Racing

- Formula Bharat - Overall Second Place (2022)

Mora Avions

- ImechE UAS Challenge - Overall Third Place (2021)
- ImechE UAS Challenge - Overall Second Place (2022)

Football

- Sri Lanka Unversity Games - Champions (2019)
- FA Cup university league - Champions (2022)
- All-Island Futsal Championship - Plate Champions (2016)