LASITH DISSANAYAKE

MATERIALS SCIENCE & ENGINEERING (UG)

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No. 29/7A, Sirimaluyana, Boruppa, Gunnepana, Kandy.
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EXPERIENCE

Michelin Lanka (Pvt) Ltd - Casting Product Division
R&D Department - Intern
11/2023 - 05/2024

- *Experienced Casting Manufacturing Practices and Procedures.*
- *Participated in Training sessions and Managerial Meetings*

EDUCATIONAL BACKGROUND

B.Sc. Eng. Hons. in Materials Science & Engineering (UG)
University of Moratuwa
2021 - Present

- CGPA - 3.50 (with 3 Dean's List Performances)
- Focused on Metallurgy and Polymer
- Final Year Project - Solar Cell Property Optimization

Kingswood College Kandy
2005 - 2018

- GCE O/L Examination - 8A, 1B (English Medium)
- GCE A/L Examination - 2A, 1B (Sinhala Medium)

EXTRA-CURRICULAR ACTIVITIES

Web Manager
Society of Materials Engineering Students
2023, September - Present

Director of Public Relations Piller
Mora Esports Community
2022 - 2023

Assistant Piller Head of Public Relations
Mora Esports Community
2022-2021

linkedin.com/in/lasith-dissanayake/

PORTFOLIO WEBSITE

https://lasith-mse.netlify.app/

SKILLS

- Leadership
- Teamwork
- Problem-Solving
- Communication skills
- 2D Drawings (AutoCAD)
- 3D Modeling (Solid Edge, Solidworks)
- 3D Animations (Blender)
- Programming (Python)
- Machine Learning

QUALIFICATIONS

- Lean Six Sigma Black Belt
- Lean Specialist
- Minitab Expert

VOLUNTEER WORK

International Service Director
Rotaract Club of Kandy
2021-2022

Treasurer
Rotaract Club of Kandy
2020-2021

PROJECTS

Machine Learning Based Optimization of CZTS Photovoltaic Parameters - 2025 (in progress)

Working on the Final Year Project to optimize the photovoltaic parameters such as Open Circuit Voltage, Short Circuit Current Density, Fill Factor and Efficiency using **Machine Learning** and with the help of **Simulations** using the software SCAPS. Currently, in the process of developing the Machine Learning models to predict and forecast the properties of a given solar cell when the input parameters are given.

Design and Implementation of a Corrosion Protection System for Offshore Substation Platform - 2024

Conducted simulations using **COMSOL Multiphysics Software** to design a Corrosion Protection System for the legs of an offshore substation platform. Suggested a cathodic protection system and tried multiple designs. Suggested the most suitable design for the Cathodic Protection System with simulated results.

Gear Box Design - 2023

A collaborative project involving the design and simulation of a functional gearbox for a vehicle model using **Solid Edge software.** Designed the gear box, based on the calculations done for the gears, keys and splines, bearings including the housing as well.

Investigating a Diffusion-Based Approach for Time Since Death Estimation - 2023

Investigated time since death estimation through **diffusion-based analysis**, using potassium concentration differences in vitreous humor. I developed a **Python program** to correlate potassium reduction with the time since death.

Exercise Machine Design - 2023

Contributed to the enhancement of a cyclic exercise machine's productivity and market value through innovative part designs. I utilized **Blender for 3D modeling**. Designed an exercise machine focusing on the cost and affordability for the users.

Aluminium Extrusion Die Design - 2023

Collaborative effort to design an aluminium extrusion die, considering factors such as die ratio, tongue ratio, swelling, pressure, temperature control, and material flow. I created **3D designs and animations using Blender**.

Solution to Eutrophication - 2022

Led a team in the design of floating equipment to mitigate water stagnation and combat eutrophication in endangered lakes, targeting the pre-eutrophication period.

REFERENCES

Dr. D. Attygalle
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Faculty of Engineering
University of Moratuwa
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