Limal D B Ariyarathna, MIET

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PROFESSIONAL SUMMARY

Dedicated engineer with a strong focus on solving complex problems through innovative design and practical application. Specialising in engineering design, HVAC systems, CNC, and 3D printing technologies, and pursuing Chartered Engineer status.

PROFESSIONAL EXPERIENCE

Lecturer in Engineering | University Center Weston, UK **Sep 2023 – Present**

- Leading Modules on Electro-Mechanical Systems, Thermodynamics & Fluid Dynamics, Dynamics and Structural Mechanics for BEng programme affiliated with University of West of England.
- Providing training in MATLAB and SolidWorks for its application in design and simulation.
- Conducting lab classes to prepare students for complex engineering challenges.
- Writing assignments briefs and exam papers; ensuring compliance with OFSTED quality standards.

Assistant Lecturer | University of Peradeniya, Sri Lanka **Feb 2022 – Apr 2023**

- Coordinated and delivered courses on HVAC Systems Design, Machine Design, Finite Element Analysis, and 3D Modeling (CAD).
- Developed a practical course on Computer-Aided Modelling (SolidWorks) and Finite Element Analysis (ANSYS Structural, ANSYS Fluent), enhancing the curriculum with hands-on learning.
- Created a website for document management for Washington Accord Accreditation (IESL), which streamlined document retrieval and storage.

Instructor | University of Peradeniya, Sri Lanka **Aug 2020 – Jan 2022**

- Conducted labs and workshops for mechanical design and control engineering.
- Developed detailed marking schemes for assignment evaluations, ensuring consistent and fair grading.

Engineering Trainee | Ansell Lanka Pvt Ltd, Sri Lanka **Mar 2019 – May 2019**

- Programmed and tested an Automated Medical Glove Packing System using ABB IRB 360 industrial robot, decreasing the manual labor requirement from four to one.
- Assisted in PLC programing of a glove sorting conveyor to reduce the sorting time by 50%.
- Completed occupational health and safety training, which contributed to zero accidents during the project.

Engineering Trainee | Dynamic Technologies Pvt Ltd, Sri Lanka **Oct 2017 – Jan 2018**

- Designed a low bed silo carrier which reduced the total transport height by 300 mm.
- Operated the CNC plasma cutter using FastCAM and FastNEST software for precise sheet metal cutting.
- Supervised the welding and sand blasting of the frame.

PROJECTS

Testing of Hull Reservoir Wave Energy Device **Jan 2023 – Jun 2023**
Research project conducted at University of Peradeniya

- Conducted Instrumentation and calibration of the data acquisition system for the experiment.
- Utilized LabVIEW for data acquisition and applied Fast Fourier Transform (FFT) analysis in MATLAB for signal filtering.

Computational Modelling of an Archimedes Screw Turbine **Jun 2019 – Jul 2020**
Undergraduate group project

- Simulated a CFD model of an Archimedes screw turbine in Simcenter STAR-CCM+.
- Compared the turbine efficiency for various geometries and flow conditions.

Design of the Automatic Medical Glove Packing System **Mar 2019 – May 2019**
Industrial internship project at Ansell Lanka (Pvt) Ltd., Sri Lanka

- Designed a mechanism to automate the medical glove packing process, reducing the worker count from four to one and decrease packing time by 400%.
- Minimized physical jolts by implementing motion functions in 'RAPID' programming language.

Design and Testing of a Low Cost Hydrogen Fuel Cell **Sept 2018 – Feb 2019**
Undergraduate individual project

- Designed and fabricated a low-cost experimental rig to test voltage variation with pressure.
- Tested the performance of the electrolyser using different combinations of electrodes and electrolytes.

Design and Fabrication of a Hydraulic Press Frame **Oct 2017 – Jan 2018**
Industrial internship project at Dynamic Technologies Pvt Ltd, Sri Lanka

- Designed the frame and analysed the critical stress points for identifying the locations of reinforcements using SolidWorks.
- Fabricated the frame for a hydraulic press. Increased the pressing capacity by 100% from 20 ton to 40 ton.

ENGINEERING SKILLS

Software

- **CAD** : Proficient in SolidWorks; Intermediate level in Solid Edge, AutoCAD, Autodesk Inventor
- **Simulation** : Proficient in MATLAB; Intermediate level in Festo FluidSIM, COMSOL Multiphysics, STAR-CCM+, LabVIEW (National Instruments), ANSYS, Siemens LOGO
- **Office Suite** : Word, Excel, PowerPoint and Project.

Technical Skills

- **Manufacturing**: CNC Programming and Operation, 3D Printing Technologies
- **System Design** : Mechanical and Control System Design, Thermal Systems Design & PLC Programming

EDUCATION

BSc in Engineering (Mechanical Engineering) **Nov 2015 - Jul 2020**
University of Peradeniya, Sri Lanka

GPA 3.9/4.0 (First Class Hons) | Best Performance in General Programme of Engineering (2015)

EXTRACURRICULAR ACTIVITIES

- **Rugby** : Sri Lanka Universities Sports Association (SLUSA) Colours
- **Basketball** : University Colours
- **Societies** : Treasurer, Kingswood College Astronomical Society (2014)

MEMBERSHIPS & LICENSES

- **Memberships :** Member of Institute of Engineering and Technology (MIET)
  Associate Member of Institute of Engineers, Sri Lanka (IESL)
- **Licenses :** UK Full Driving License

References Are Available Upon Request