



# Sanath Kumara Thilakarathna.

## Mechanical and Manufacturing Engineer

dmsksanath@gmail.com | +94 719626147 | Minuwangoda, Sri Lanka.

[in](#) LinkedIn

I am a responsible, dedicated, and reliable Mechanical and Manufacturing engineer with a strong interest in Mechanical Design, FEA, Robotics, Industrial Automation, Production and Maintenance. I am committed to expanding my knowledge and experience in these fields, focusing on designing and developing sustainable and innovative technologies. My goal is to make significant contributions to the success of the industry.

## Work Experience

---

### ➤ Mechatronics Engineer at LE Robotics (Present)

- Developed firmware for scara robot end-effector controller.
- Developed desktop application for configure and control the robot arms.
- Improved the SD card initialize and read, write firmware to access both SD and SDHC cards.
- Developed mechanical design, firmware, desktop application for automating potentiometer QA process.
- Implemented DH-parameter model for a robot arm.

### ➤ Intern at Dilmah Ceylon Tea Company PLC (2023) – Mechatronics Engineer

- Designed a carton lifting mechanism and supervised the manufacturing and assembly process.
- Collaborated with the Production and QA departments to review the tea leaves silo connection identification system.
- Designed a velvet sticker paper punching machine.
- Collected the data for the design and implementation of new packaging machines.
- Participated in daily and weekend machine maintenance and service works (Chillers, Generators, Pnumatic system, Electrical Panel Boards).

### ➤ Intern at Trischel Fabric (Pvt) Ltd. (MAS Holdings) (2022) – MEP Engineer

- Designed the thermic oil pipeline layout for installing the new Stenter machines.
- Created a mobile app on Microsoft Power Platform to calculate the plant's electricity demand to manage generator power during fuel crisis in SL.
- Designed a diesel bowser unloading station and prepared the BOQ.
- Designed and fabricate a Teflon gasket cutter to reduce cutting time from 10 mins to 3 mins
- Developed an desktop application for preventive maintenance scheduling.
- Participated in Flatbed printer belt replacement.
- Participated daily maintenance and service works (Chillers, Pnumatic system, Thermic Oil Heaters, Steam and Hot system, Electrical Panel Boards, Softner).

## Education

---

### ➤ Faculty of Engineering, University of Ruhuna, Sri Lanka. (2019 – 2024)

BSc. of Engineering Honours in Mechanical and Manufacturing Engineering.

Course Work - Mechanical Design, Mechatronics Engineering, Kinematics, Thermodynamics, Control Engineering, Manufacturing Technologies, Maintenance Management, Lean Manufacturing  
GPA – 3.2

## Certifications

---

### ➤ Project Management Specialization - University of Colorado Boulder – Coursera (2024)

### ➤ Rapid Prototyping Using 3D Printing Specialization – Arizona State University – Coursera (2023)

### ➤ Become a PLC Developer Learning Path – LinkedIn Learning (2023)

### ➤ Scientific Computing with Python – freeCodeCamp (2023)

- Certificate course in PLC Programming – Web Sayura Academy by Eng. Buddhika Weerasekara (2021)
- Introduction to Programming with MATLAB – Coursera (2020)
- Certificate Course in Soft Skills – Career Guidance unit, UOR (2020)
- Certificate course in English – Kekirawa English Academy (2017)

## Skills

---

- CAD / CAM – Solidworks, Fusion 360, AutoCAD
- Computer Programming – C/C++, Python, Matlab, C#, Embedded C
- PCB Design – Proteus, KiCAD
- Electronics – Arduino, ESP32, Raspberry pi
- PLC – Omron, Delta, Haiwell, Siemens
- Documentation – MS Office Package, Libre Office Package, Google Workspace
- Manufacturing – CNC Lathe Machining, Welding
- Languages – Sinhala (Native), English (Fluent), Japanese (basic)

## Achievements

---

- Finalist at the IEEE R10 Robotics Competition 2022 at Chulalongkorn University, Bangkok.
- Singapore Space Challenge (SSC) 2020 for designing ISRU-capable Lunar Rover (Participant)
- Mexcellence 2019 – Robot Competition (Winners)
- Mexcellence 2019 – Cad eager competition (Participant)

## Projects

---

- Carton lifting machine design and Fabrication – Dilmah Ceylon Tea Company
- Real-time Parameter Monitoring System for Latex – Final Year Project.
- Design and Fabrication of a Tefloan gasket cutter - Trischecl Fabric (Pvt) Ltd.
- Electricity Demand Calculator mobile app - Trischecl Fabric (Pvt) Ltd.
- Mini Project on Designing and Controlling a 1 DOF Magnetic Levitation System
- Automated Tea Packaging Machine
- Arduino line following and remote-control robots
- Face detection and recognition project
- Customers following shopping cart
- Development of a Low-Cost Windmill Water Pump for Remote Use – Group Member

## Referees

---

Eng. Darshana Alahakoon  
Head of Engineering  
MJF Group / Dilmah Ceylon Tea Company PLC  
111, Negambo Road, Peliyagoda, Sri Lanka  
Phone: +94 11 482 2000, +94 11 482 2144  
Mobile: +94 77 776 1771  
Email: darshana.alahakoon@dilmahtea.com

Eng. Ramitha Dissanayake  
Head of Engineering  
Trischel Fabric (Pvt) Ltd  
MAS Fabric Park, Kurunegala Road, Thulhiriya, Sri Lanka  
Mobile: +94 760399826  
WeChat ID: DRD0771368970  
E-mail: darshanada@trischel.com

I certify that the particulars mentioned earlier are true and accurate to the best of my knowledge.