



# Sanyog Lamsal

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## SUMMARY

Adaptable Mechatronics Engineer with experience in mechanical design and R&D across various industries. Skilled in 3D CAD modeling, prototyping, product development, instrumentation, and multibody simulations. Experienced in integrating mechanical, electrical, and control systems. Seeking opportunities to apply my skills and grow in a dynamic, innovation-driven environment.

## WORK EXPERIENCE

**Aalto University – Fluid Power Lab** **Nov. 2022 – Present**  
*Project Engineer* *Espoo, Suomi*

- Contributing to the design and development of a waste heat utilization system, focusing on researching new concepts, CAD design, simulations and manufacturing test setups.
- Assembling systems, installing sensors/actuators, and integrating control and instrumentation systems using Beckhoff PLC and TwinCAT3.
- Previously collaborated with Valmet Technologies to improve paper machinery vibration damping using hydraulic solutions.
- Managed the setup and configuration of a data acquisition (DAQ) system utilizing a Measurement Computing device and developed a custom data acquisition program in Python.

**Mantra Incorporation** **May 2020 – Dec 2021**  
*Product Development Engineer* *Kathmandu, Nepal*

- Managed multiple machine design projects, primarily in construction machinery, from concept to completion, including engineering calculations, CAD modeling (SolidWorks), prototyping, and system modeling using MATLAB Simulink.
- Supervised the manufacturing process, ensuring designs met engineering specifications and project requirements.

**Upwork** **Feb 2020 – Mar 2024**  
*Freelance Engineering Consultant* *Remote*

Provided mechanical design solutions and CAD services for clients across various industries and assisted in the development of engineering and CAD-related software.

## EDUCATION

**Aalto University** **December 2024**  
*M.Sc. in Mechanical Engineering, Major (Mechatronics)* *Espoo, Suomi*

- Graduated with honors, GPA – 4,41
- Course Work: Machine Design, Fluid Power Systems, Fluid Power Basics, , Robotic Manipulation (ROS), Fluid Power Dynamics, Selection of Engineering Materials, Product Development Project, Mechatronics Exercises

## CERTIFICATIONS, SKILLS & INTERESTS

- **Skills:** SolidWorks (6+ years), MATLAB, Python, System Modeling with Simulink, Hydraulics/Pneumatics Design and Commissioning, Prototyping and Product Development, PLC Commissioning and Programming with Beckhoff TwinCAT3 and Tia Portal, Mechatronics Design, Simscape Multibody, NX and Teamcenter PLM, Catia, Build123d, COMSOL Multiphysics, Sensor Data Acquisition and Instrumentation Systems, ROS
- **Manufacturing Skills:** Hands on experience with Manual lathe & Milling Machines, 3D Printing, Laser Cutting (2D CAM), Surface Grinders, Spot Welders, Sheet Forming/Cutting Tools
- **Soft Skills:** Strong Communication and Presentation, System-level Thinking, Project Management, Teamwork, Adaptability, Passion for Impactful Design, Autonomous Work
- **Certifications:** Official Beckhoff TwinCAT 3 training, EdX Machine Dynamics with MATLAB, MATLAB-Control Design Onramp

## AWARDS & GRANTS

- **Team of the Year** - Product Development Project, Aalto University
- **Yrjö Ja Senja Koivunen Foundation Scholarships 2023** (Yrjö Ja Senja Koivusen Säätiön Opiskelijastipendit 2023)
- **Category - A Scholarship for M.Sc.** - Aalto University
- **Team Awards** - ABU Robocon Competition, Vietnam (2018), Japan (2017)
- **1st Place** - ASME Design for Social Impact CAD Competition - Grab CAD & Solid Edge (2019)

**REFERENCES** - [Jyrki Kajaste](#), [Jari Vepsäläinen](#), [Petri Kuosmanen](#) – Fluid Power Lab, Aalto University