

Rabindra Acharya

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PROFESSIONAL SUMMARY

An avid learner who wants to streamline his energies and skills in bringing technology to augment safe and interactive experiences in people.

RESEARCH INTERESTS

autonomous systems, control application in robotics, medical devices, operations research

EDUCATION

Institute of Engineering, Tribhuvan University

B.E, Mechanical Engineering, 2019

Relevant coursework: Control system, Operations research, Advanced mechanical design, Fluid mechanics, Strength of materials, C programming, Economics, Theory of machines, Machine design

Projects: Electric wheelchair, Estimation of flight delays using monte-carlo simulation, study of hydrophobic thin-film based on nanocellulose for self-cleaning application for solar panels (published in Macromolecular Symposia, Wiley).

Percentage: 71.94%

Capital College and Research Center

High School, 2015

Percentage: 82.5%

EXPERIENCE

National Innovation Center, Kathmandu, Nepal

Researcher, Mechanical Engineer, 2020-2023

- Performed SOLIDWORKS design and created a MVP Prototype of an Autonomous Mobile Robot ensuring optimal sensor performance, lightweight structure and stability. Created a mechanical bump sensor. URDF creation and gazebo simulation.
- Involvement in [Nyano Nani V1](#), an infant radiant warmer in the areas of product design, radiation distribution and stress tests. Drafted design documents, FMEA table, 3D and 2D production drawing, assembly manual and production manual for Nyano Nani V1 according to IEC 60601-1 and IEC 60601-2-21. Made an initial MVP with Formlabs SLA 3D printer, laser cutter, plasma cutter and workshop equipment.
- Collaborated with TU Delft to create MVP of Nyano Nani V2 that is 29% more energy efficient, 35% lighter and 55% smaller.
- Incorporated DFMA principles in product design of AMR and Nyano Nani. Involved in financial part of product design process for Nyano Nani V1.

Entegra Sources, Kathmandu, Nepal

Mechanical Engineer, 2020 – 2020

- Computational fluid dynamics using user defined functions. Drafting using Solidworks and Autodesk Fusion 360 and rendering in 2D.
- Performed parametric designs of four bar linkage, crankshaft, Pelton turbine and manual transmission for academic and educational purposes only.

Society of Mechanical Engineering Students (SOMES), IOE Pulchowk Campus, Lalitpur, Nepal

Mentor, Program Coordinator, 2015 – Present

- Developed curriculum for Solidworks 3D CAD Fellowship Program and Ansys Training Program. Conducted the training programs for undergraduates of Institute of Engineering, Pulchowk Campus.
- Conducted Physics-Math Olympiad 2018.

PROFESSIONAL SOCIETIES

- Society of Mechanical Engineering Students (SOMES) – Mentor, Program Coordinator
- Nepal Engineering Association – Member
- Nepal Engineering Council – Registered Professional Mechanical Engineer

HONORS AND AWARDS

- Full Scholarship at Institute of Engineering (IOE), Tribhuvan University.
- Research Grant from National Youth Council, Govt of Nepal.
- Golden Jubilee Scholarship, Indian Embassy of Nepal.
- COMPEX Scholarship, Indian Embassy of Nepal.
- Best Design Award in National Mechanical Engineering Expo 2018. Project: E-Wheelchair.

PUBLICATIONS

'[Surface Modification of Polyvinyl Alcohol-Nanocellulose Composites for Hydrophobic Self-cleaning Solar Panel Cover](#)'

LICENSES AND CERTIFICATIONS

- Professional Mechanical Engineer (Nepal Engineering Council, Govt of Nepal)
- Certified Solidworks Professional – Mechanical Design (Dassault Systemes)
- Certified Solidworks Professional Advanced – Sheet Metal (Dassault Systemes)
- Certified Solidworks Professional Advanced – Weldments (Dassault Systemes)
- Certified Solidworks Professional Advanced – Drawing Tools (Dassault Systemes)

SKILLS AND PROFICIENCIES

- Robotics: ROS Noetic, Gazebo, SLAM, ROS nodes and topics, ROS message, Turtlebot navigation.
- IoT: Raspberry Pi and Python Programming
- Programming Languages: Python, C, G-Code
- CAD: Solidworks, Autodesk Fusion 360, AutoCAD
- CAE: Ansys
- Statistics: Minitab, Crystal Ball
- Languages: Python, C.