Rabindra Acharya

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Professional Summary

I'm a mechanical engineer interested in human-centered design, medical devices, and robotics who wants to be a part of a multi-disciplinary research environment to streamline my energy and skills to augment safe and interactive experience in technologies for people.

Research Interests

Human centered design, medical devices, prosthetics, robotics, dynamics, control, mechanical design, computer aided design, additive manufacturing

Education

Institute of Engineering, Tribhuvan University
B.E, Mechanical Engineering, 2020
(71.94%)

Capital College and Research Center
High School, 2015
(82.5%)

Experience

Nepal Airlines Corporation — Kathmandu, Nepal
Senior Technical Officer – Part 145: Approved Maintenance Organization — 2023 – 2024

- Working on planning of schedule maintenance and maintenance control of Airbus A320.
- Relevant Aviation Trainings: (Aircraft) Electrical Wiring Interconnection System(EWIS), Root Cause Analysis, Safety Management Systems, and Human Factors.

National Innovation Center — Kathmandu, Nepal
Mechanical Engineer – R & D — 2020 – 2023

- Performed full product engineering design of autonomous mobile robot 'MINA' using SOLIDWORKS and constructed a MVP prototype using additive manufacturing and other technologies contextually available – creating URDF to integrate the design into the ROS environment.
- Performed engineering design of the sub-assemblies of 'NYANO NANI' – an infant radiant warmer designed for newborn infant healthcare. Carried out risk management according to medical device standards: IEC 60601-1 and IEC 60601-2-21.
- Designed and 3D-Printed injection mold for plastic parts of 'NYANO NANI' to refine production capabilities using SLA 3D Printer.
- Collaborated with TU DELFT faculty of advanced mechanical design and MIT MISTI students to create NYANO NANI V2 – 29% energy efficient, 35% lighter, and 55% smaller.
- Design for housing for electronic and IoT based educational kit: LOOMA.

Entegra Sources — Kathmandu, Nepal
Mechanical Engineer — 2020 Summer

- Performed computational fluid dynamics simulations using user defined functions in ANSYS.
- Carried out mechanical designs in SOLIDWORKS and documentation of those projects for presentation and teaching.

Professional Societies

Alumni of SOMES – IOE, Tribhuvan University

- Mentor of CAD and CAE – developed my own curriculum to teach undergraduate students.
- Conducted pre-events of National Engineering Exhibition 2018 as a Program Coordinator.

Member of Nepal Engineering Council (NEA)

- Professional Engineer (PE), Mechanical - Certified

Honors and Awards

Full scholarship for undergraduate engineering education at Institute of Engineering (IOE), Tribhuvan University – by securing a rank of 76 / 12K on the merit-based examination conducted by IOE.

Research Grant by National Youth Council, Nepal.

Golden Jubilee Scholarship by Indian Embassy, Nepal.

COMPEX Scholarship by Indian Embassy, Nepal.

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

- CAD: Solidworks, Autodesk Fusion 360, AutoCAD.
- CAE: Ansys.
- Statistical: Minitab, Crystal Ball.
- Robotics: ROS
- Languages: Python, C.
- Rapid Prototyping: 3D Printing – SLA and FDM, Plasma Cutting, Laser Cutting, 3-AXIS CNC Milling.