Rabindra Acharya

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Professional Summary

A passionate mechanical engineer with three years of experience at a research institution involving in multiple developments that fits in the socio-economic context of Nepal. Currently working at a state-owned commercial airline's maintenance division as a Sr. Tech. Officer maintaining continuing airworthiness of Airbus A320.

Research Interests

Human centered design, medical devices, prosthetics, robotics, mechanical design, computer aided design, additive manufacturing, biomechanics, implants, machine learning

Experience

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

- Working as a schedule maintenance planner of an Airbus A320. Monitoring continuing airworthiness of the aircraft ensuring proper documentation and execution of maintenance activities of Line and Base Maintenance – reporting and rectifying repetitive defects according to relevant aviation maintenance practices – contributing to reliability increase of the fleet by 12%.
- 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 an MVP prototype using additive manufacturing and other technologies contextually available.
- 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.

Education

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

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

Professional Societies

Member of Nepal Engineering Council (NEC)

- Professional Engineer (PE), Mechanical – Certified

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.

Honors and Awards

Full scholarship for undergraduate engineering education at Institute of Engineering (IOE), Tribhuvan University – by securing a rank of 76 / 12K based 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..
- Robotics: ROS, 3D Printing
- Languages: Python, C.
- Rapid Prototyping: 3D Printing – SLA and FDM, Plasma Cutting, Laser Cutting, 3-AXIS CNC Milling.
- Statistical: Minitab, Crystal Ball