



Prasiddha Raut

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EDUCATION AND TRAINING

2020 – 2025 Dhulikhel, Nepal

BACHELOR IN MECHANICAL ENGINEERING Kathmandu University

Website ku.edu.np | **Field of study** Mech

2018 – 2020 Kathmandu, Nepal

A-LEVELS Budhanilkantha School

Website bnks.edu.np

WORK EXPERIENCE

RENEWABLE ENERGY ENGINEER – RENEWABLE ENERGY CONFEDERATION OF NEPAL (RECON) – 17/11/2025 – Current
– KATHMANDU, NEPAL

Project: Sustainable Healthcare Service through Renewable Energy, Roshi Rural Municipality, Kavrepalanchowk (DFAT – Australian Aid)

- Currently spearheading the planning and execution phase of a DFAT-funded renewable energy project aimed at strengthening healthcare services through solar PV systems in community health posts of Roshi Rural Municipality.
- Leading site assessments, technical scoping, system sizing discussions, and design review coordination, working closely with engineers, local governments, and health facility representatives to ensure context-appropriate system planning.
- Coordinating procurement planning, implementation scheduling, and stakeholder engagement with Roshi Rural Municipality, health institutions, and technical partners in preparation for installation and deployment.
- Overseeing project documentation, progress tracking, and reporting, while ensuring alignment with DFAT environmental, social, and accountability safeguards and supporting preparation for upcoming installation and training phases.

Renewable World Nepal (CONNECT Project)

- Assisted coordination with clients, vendors, and stakeholders to promote affordable RET solutions in buffer zone communities under the CONNECT project.
- Supported market research on RET availability, affordability, and accessibility, and assisted in developing RET awareness materials, including community-focused information leaflets.
- Assisted in organizing a field event in Attaria, supporting data collection on community awareness, demand, and willingness to adopt renewable energy technologies.

FIELD ENUMERATOR AND ENERGY AUDITOR – WINDPOWER NEPAL PVT. LTD. – KATHMANDU, NEPAL

Project: Baseline Study and Energy Audit for “BEACON – Bridging Engagement Across Community and National Actions for Climate and Energy Resilience in Nepal”

Position Held: Renewable Energy Engineer (Field Enumerator and Energy Auditor)

Relevant Experience:

- Contributed to a comprehensive baseline study and energy audit supporting a donor-funded climate and energy resilience project targeting marginalized and flood-affected communities in Melamchi Municipality, Nepal.
- Supported assessment of household and institutional energy access, consumption patterns, costs, reliability, and efficiency, including clean cooking, electricity use, and productive energy applications.
- Assisted in data collection and analysis for socio-economic, gender, and livelihood dimensions of energy use, with emphasis on women, single women-headed households, and vulnerable groups.
- Engaged in evaluation of public institutions (schools, health posts, community buildings) to assess energy performance and service delivery implications.
- Supported policy alignment analysis with Nepal’s Nationally Determined Contribution (NDC 3.0) and the Renewable Energy and Energy Efficiency Bill, contributing evidence for decentralized clean energy planning.
- Assisted in preparation of analytical inputs for baseline reporting, ensuring consistency with results-based frameworks and donor requirements.

- Assisted in an ICIMOD-supported PURE Platform sensitization project, supporting multi-provincial workshops through logistics coordination, stakeholder mapping, institutional analysis, documentation, and inter-agency communication with federal, provincial, and local government bodies; contributed to background research, data compilation, and validation activities for the Strategic Engagement Plan of Action (SEPA), and supported coordination between ICIMOD, WindPower Nepal, and government counterparts to align outcomes with national energy and development planning frameworks.
- Assisted in field-based hydroponics programs at Muttha Agro, supporting installation and commissioning of hydroponic systems (structural setup, plumbing, pumps, reservoirs, and water circulation), preparation and monitoring of nutrient solutions (pH and EC), crop transplanting and monitoring, and hands-on support during training sessions, while also assisting in field visits, basic technical assessments, data collection, and report preparation related to renewable energy and sustainability projects.

HVAC ENGINEER (INTERN) – AIRTECH PVT. LTD., KATHMANDU, NEPAL – 15/03/2025 – 15/06/2025 – KATHMANDU, NEPAL

- Assisted in the design, installation, and supervision of HVAC systems across residential and commercial sites. Conducted load calculations using AutoCAD and Excel, supported BOQ preparation, verified materials, and collaborated with site engineers to ensure smooth project execution.

SOCIAL MEDIA MANAGER – STUDENT FOR THE EXPLORATION AND DEVELOPMENT OF SPACE, KATHMANDU UNIVERSITY – 2023 – 2024 – KATHMANDU, NEPAL

- Led content strategy and community engagement across platforms, creating multimedia content and running targeted campaigns that boosted outreach. Monitored analytics, collaborated on event promotion, and aligned posts with trends in space and technology.

EDUCATIONAL VIDEO CREATOR – LEADING UNIVERSITY PROJECT FOR INTERNATIONAL COOPERATION (LUPIC), KATHMANDU UNIVERSITY – 2023 – KATHMANDU, NEPAL

- Developed and produced educational videos for children from grade 6 to grade 9, focusing on key academic subjects. Collaborated with educators to ensure content was aligned with the curriculum and delivered in an engaging manner.

GRAPHIC DESIGNER – GREEN CLUB OF THOUGHTS, KATHMANDU UNIVERSITY – 2022 – 2023 – KATHMANDU, NEPAL

- Led the design of sustainability-themed magazines, developing cohesive branding and layouts for both print and digital formats. Collaborated with writers and photographers, using Adobe InDesign, Photoshop, and Illustrator to deliver professional-grade visual content.

● **PROJECTS**

A SPATIAL MAPPING AND ENERGY PLANNING OF SOLAR PV SYSTEM - A CASE STUDY IN SURYABINAYAK MUNICIPALITY

Designed and analyzed optimized solar PV energy systems for Suryabinayak Municipality using GIS-based spatial mapping, HOMER Pro, and PVsyst, achieving high renewable penetration and cost-effective energy planning.

Energy Audit of an Educational Institution

Performed a detailed energy audit to assess energy consumption and efficiency, recommending actionable solutions for reducing energy costs and improving sustainability.

Development of Laboratory Scaled Solar Pond

Designed and developed a scaled-down solar pond to study its efficiency in thermal energy storage, exploring its potential in renewable energy applications.

Semi-Automatic Unidirectional Seed Sowing Machine

Designed and developed a semi-automatic seed sowing machine, aimed at improving farming efficiency. Produced a detailed constructional manual to assist others in replicating the machine.

Research Paper: A Review on Cleaner and Safer Propellant Materials for Space Vehicles and Their Characterization

Conducted an in-depth review of alternative propellant materials for space vehicles, focusing on their environmental impact, safety, and performance characteristics.

Fabrication and Analysis of Chebyshev Lambda Linkage

Fabricated and analyzed a Chebyshev lambda linkage mechanism, studying its mechanical behavior and potential applications in modern machinery.

Research Article: Thermal Analysis of Building Materials

Conducted a thermal analysis of various building materials, evaluating their energy efficiency, insulation properties, and suitability for sustainable construction.

Case Study: The Primitive Technology of Nepal – Rato Machindranath Rath

Examined the primitive engineering techniques used in the construction of the Rato Machindranath Rath, a significant cultural symbol in Nepal.

Case Study: Streamlining Sustainability – Pipe Selection for Solar Room Heating System

Investigated sustainable material options for pipe selection in solar room heating systems, providing an analysis on cost-effectiveness and environmental impact.

Research on Metal Gallium

Conducted in-depth research on the properties, applications, and industrial significance of metal gallium, with a focus on its role in semiconductors and electronics.

SKILLS

Microsoft Office | Microsoft Word | Adobe Photoshop | Microsoft Excel | Autodesk Fusion 360 | Solidworks | Adobe Illustrator | Microsoft Powerpoint | HOMERPro | PVsysts | engineering equation solver | SketchUP (3D modelling) | DavinciResolve | SHW | Adobe InDesign | KoboToolbox | Google Earth Engine (GEE)

LANGUAGE SKILLS

Mother tongue(s): **NEPALI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

CERTIFICATIONS

Nepal Engineering Council, 13/11/2025

Nepal Engineering Council Registered Engineer (94197, Mechanical Engineer)
