
Suraj Paudel

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Objective

Innovative Electronics and Communication Engineer with extensive experience in robotics, drone technology, and sustainable development. Committed to using technology to address societal challenges and promote sustainable development, making significant contributions to both the local and global community.

Education

Bachelor of Electronics and Communication Engineering

Advanced College of Engineering and Management, IOE, Tribhuvan University, Nepal

Bhubaneswori Marga, Kalanki-14, Kathmandu

September 2016- November 2023

+2 Science

Tops Higher Secondary Boarding School

Ramghat-10, Pokhara

May 2014- June 2016

Professional Experience

Airlift Technology Pvt. Ltd.

Position: Chief Technology Officer

Dates of Employment: August, 2022 – Present

- Led the world-first High Fly Trash Cleanup on Mount Everest using drone technology solving trash problem in high altitude.
 - Virtual Tour(Route) for Everest Base Camp Trail.
 - Organizing various workshops and conferences on the application of technology to sustainable development and planning.
 - Led drone mapping projects and 3D tours,
 - Providing internship and training to the students.
 - Developed and implemented innovative drone technology for various applications.
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Marbi Tech Industries Pvt. Ltd.

Position: Chief Executive Officer

Dates of Employment: August, 2022 – Present

- Development of an automatic water pump controller, enhancing water management efficiency.
- Led the creation of a hydropower penstock inspection robot, improving maintenance operations.
- Developed a cycle-sharing app and cycle lock system, contributing to sustainable urban mobility.
- Designed and implemented an automated greenhouse system and automated powder factory, driving advancements in agricultural and industrial automation.
- Consultation and planning of manufacturing factories.

Muktinath Krishi Company Limited

Assistant IT Officer

Dates of Employment: February, 2022 – July, 2022

- Introduced drone technology for precision farming, enhancing agricultural productivity and efficiency.

Research and Innovation Unit

Research Assistant

Dates of Employment: April 2021, – February, 2022

- Consulted Udayapur Cement Industry, leading factory audits.
- Customer Churn Analysis for ISP.
- Building 3D printers and training students about 3D printers.
- Trained students and did research on robotics and drones, including the development of a mapping drone from scrap.

MARBI

Secretary(NGO)

Dates of Engagement: 2016 – Present

- Lead initiatives focused on the upliftment of marginalized communities, ensuring the effective implementation of programs aimed at improving education, health, and economic opportunities for Beggars.
- Collaborate with local leaders and stakeholders to design and execute projects that address the specific needs of marginalized groups.
- Oversee fundraising efforts, grant applications, and partnerships to support ongoing and future initiatives.

Bhumisthan Youths

Secretary(NGO)

Dates of Engagement: 2023 – Present

- Drive community problem-solving initiatives by identifying local issues and developing sustainable solutions with a global impact.
- Coordinate youth engagement activities and workshops to empower local communities and foster a culture of innovation and social responsibility.
- Manage communication and outreach efforts to raise awareness of community challenges and the organization's impact.

Consultant & Researcher – Udayapur Cement Industry Limited

Dates of Involvement: June 2022

- Conducted a comprehensive factory audit to assess overall operational efficiency and compliance with industry standards.
- Performed an energy audit to identify areas for reducing energy consumption and optimizing production processes.
- Led a detailed factory analysis to pinpoint bottlenecks and recommend improvements, resulting in enhanced operational performance.

Consultant – Hetauda Cement Industry Limited

Dates of Involvement: August, 2024

- Conducted an in-depth inspection of a 550 kW motor with heating issues, analyzing the rotor and stator windings.
- Performed meggering tests, identifying critical issues in the motor's coupling with the fan.
- Recommended and implemented corrective measures, resulting in the stabilization of motor performance and prevention of overheating.

Technical Skills

- **Programming Languages:** C++, Python, MATLAB
 - **Embedded Systems:** Arduino, Raspberry-pi, ESP32, Microcontrollers
 - **Robotics:** Robot design and development, automation systems
 - **Drone Technology:** Mapping, precision farming, 3D tours, Drone Delivery
 - **3D Printing:** Design and implementation of 3D printing technology
 - **Project Management:** Research leadership, student training, community-focused tech solutions
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Projects

Automatic Pamphlet Distributing Robot

- Led the design and development of a robot capable of distributing pamphlets autonomously.

Home Automation Using Nepali Language

- Created a home automation system that operates using the Nepali language, enhancing accessibility.

Automatic Vehicle Speed Control in Speed Zones

- Developed a system to automatically control vehicle speed in designated speed zones, improving road safety.

Mapping Drone Development

- Built and tested a mapping drone from scrap materials, used in multiple mapping projects.

High Fly Trash Cleanup on Everest

- Led the world's first drone-based trash cleanup on Everest, setting a new standard for environmental conservation.

Hydropower Penstock Inspection Robot

- Developed a robot for inspecting hydropower penstocks, enhancing maintenance efficiency.

Cycle-Sharing App and Cycle Lock

- Developed a cycle-sharing app and lock system to promote sustainable urban transportation.

Automated Greenhouse System

- Designed and implemented an automated system for greenhouse management, optimizing agricultural productivity.

Automated Powder Factory

- Led the development of an automated factory for powder production, improving operational efficiency.

Drone Mapping (Aerial Survey)

- Eastern Kathmandu New Township Development Project, Kageswori Manohara Municipality, Pokhara Metropolitan City ward 2, Kathmandu Metropolitan City Ward 15, 10, 30, 25, 11, 17, Lalitpur Metropolitan City Ward 28.
- Goringhale-Chandrauta Road Extension Project.

- Bandipur-Sidhhagufa Infrastructure Development Project.

Virtual Tours

- Developed and executed a comprehensive virtual tour project, utilizing advanced drone technology to capture high-resolution imagery and create immersive 3D experiences of Everest Base Camp Trail.
 - Collaborated with clients to understand their needs, ensuring the final product effectively showcased properties, landmarks, or other points of interest for Sky Tower Kathmandu.
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Leadership and Extracurricular Activities

President, Advanced Robotics Club

Advanced College of Engineering and Management

2019 – 2020

- Led the club in various robotics projects, including the development of an automatic pamphlet distributing robot.

Co-Ordinator, Technorion Nepal

2019

- National Selection for participation in Techfest IIT Bombay for different categories of ROBOT tournament.
- National Tech Show Event.

Researcher, Nutan Research and Innovation Center

2021-present

- Aid in Research and Development programs.
- Aiding in the closing of the gap between industry and academia
- Mentoring Students with different projects.

Member, Engineers Without Borders Nepal

2022-present

- Contributed to engineering projects aimed at sustainable development and improving infrastructure in underserved communities.
- Collaborated with multidisciplinary teams to design and implement solutions that address local challenges.

- Participated in workshops and knowledge-sharing sessions to enhance technical skills and promote ethical engineering practices.
 - Created a Virtual Tour Archive Gallery of Gorkha Museum and Gorkha Durbar.
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Certifications and Training

Trainings:

- Badminton Training (2009-2014)
- Children Nepal Child Awareness Program (2013)
- Nepal Police Hand In Hand (Peace Angel) (2015)
- Advanced Electronic Circuit Development (2016)
- Learning with Python (2017)
- Machine Learning and AI (2019)

Certifications:

- 37Th Junior Badminton Championship (participation)
 - Kaski District Badminton Tournament-2013(2nd Runner Up)
 - Inter School U-16 Badminton Tournament-2013(1st Runner up)
 - Sports Week-2021 (Badminton Tournament- College Champion)
 - Sports Week-2019 (Badminton Tournament -Runner UP)
 - “Srijana”-Tech fest-2017, Manual Fighting Robot Tournament- Runner Up
 - Himalayan Robo-Soccer Tournament-2019, Winner
 - “Yantra 8.0”, Robot Business Cup- Winner
 - “Yantra 8.0”, Automatic Akhada – Runner UP
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Languages

- Nepali (Native)
 - English (Fluent)
 - Hindi (Fluent)
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References

Available upon request.