Phurba Tshering Sherpa

Namche Bazar, Solukhumbu, 56000, Nepal | phurbatsheringsherpa333@gmail.com | +977-9818032168
linkedin.com/in/phurba-sherpa-984723173

Profile

Dedicated researcher and aspiring youth with a strong technical background in power systems and interest in energy market. Passionate about leveraging research to inform sustainable energy solutions and promote social welfare. Motivated by a lifelong interest in sustainable energy and a deep understanding of the challenges facing Nepal's remote communities. Skilled in technical tools, including LaTeX, KiCAD, Proteus, DIALux, MS Office package, hardware - PLC, DigSILENT PowerFactory, MATLAB/Simulink, Labview and Python. Passionate about contributing to the development of innovative solutions for enhancing energy security and promoting sustainable development. Enthusiastic about exploring advancement in grid modernization.

Education

Bachelor's in Electrical and Electronics Engineering (Power and Control) **Aug. 2018 - May 2023**
Department of Electrical and Electronics Engineering
Kathmandu University
28-Kilo Dhulikhel, Kavre, 45200, Dhulikhel, Nepal

- **CGPA**: 3.88/4.0, **Percentage Equivalent**: 95.80%
- **Major Courses:** Electrical Machines, Measurement and Instrumentation, Power System, Power Electronics, Control System and Engineering, Power System Planning and Operation, Industrial Electrification and Control, Engineering Projects

Higher Secondary Education **July 2016 - July 2018**
United Academy
Kumaripati, Lalitpur , 8975, Lalitpur, Nepal

- **CGPA**: 3.48/4.0,
- **Major Courses:** Physics, Mathematics, Chemistry, Biology, English

Professional Experience

Research Assistant, Department of Electrical and Electronics Engineering **Aug. 2023 – CURRENT**
Kathmandu University (D-VA PROJECT, Funded Budget- NPR 4.8 million ($35,565))

Major responsibilities:

- Development of a tool for visualization of electrical distribution grid to create situational awareness
- Co-ordinate with the academic partner The Norwegian University of Science and Technology (NTNU) and industrial partner K&A about the project
- Development of electrical distribution model of the university in DigSILENT PowerFactory electrical software and run different scenarios
- Installation of smart meters at Kathmandu University distribution system for pilot implementation of grid visualization
- Work in the setup of Grid Automation Laboratory at the university.
- Publication of research papers in conferences and journals
- Overall management of the project including the budget.

Electrical Engineer Intern, DER Department, K&A Engineering, **Aug. 2023 – Sept. 2023**

Major responsibilities:

- Become familiar with Distribution Impact Studies and Co-ordination Studies
- Work on a US based project implementing mitigation of Distributed Energy Resources (DER) integration impacts in CYME electrical software
- Prepare a presentation on the work done for Distribution Impact Studies and coordination studies for DER

Electrical Engineer Intern, (400KV RATMATE-RASUAWAGADI-KERUNG TRANSMISSION LINE PROJECT), Nepal Electricity Authority **Jan. 2023 – Feb. 2023**

Major responsibilities:

- Study of the detailed feasibility study of the transmission line
- Study about the social-technical impact of the transmission line on Nepal's National Grid
- Provide a report with feedback on the implementation of the project

Conferences and Publications

- P. T. Sherpa, N. R. Shrestha, K. Chapagain, B. R. Pokhrel, S. Dahal, P. Bhattarai, and S. Gurung, "**Real-time distribution grid visualization using smart meters**," in Proc. 2024 21st Int. Conf. Electr. Eng., Electron., Comput., Telecommun. Inf. Technol. (ECTI-CON), Chiang Mai, Thailand, 2024, pp. 1–5. DOI:[10.1109/ECTI-CON60892.2024.10594919]

  Participation and presented conference paper in **The 21st ECTI-CON 2024** conference held in Khonkaen, Thailand (27 May - 30 May 2023)
- N. R. Shrestha, P. T. Sherpa, S. Gurung, K. Chapagain, B. Mallik, and B. R. Pokhrel, "**A custom developed flexible tool for real-time distribution grid visualization**," in Proc. 2024 IEEE 33rd Int. Symp. Ind. Electron. (ISIE), 2024, pp. 1–5. DOI:[10.1109/ISIE54533.2024.10595677]

  Participation in **IEEE ISIE 2024** conference held in Ulsan, South Korea (18 June - 21 June 2023)
- P. T. Sherpa, S. Poudel, A. K. Sah, P. Jha, and S. Gurung, "**Fabrication of low-cost smart energy meter**," in Proc. Communications and Information Processing Nepal, Dhulikhel, [2023], pp. 1-4. Link: [here]

  Participation and presented on fabrication of low cost smart meter in **CIP-N 2023** conference held at Kathmandu University, Nepal (7 April 2023)
- P.T. Sherpa, P. Sapkota, S. Poudel, A. Parajuli, A. Dhakal, S. Gurung, "**Experimental validation of dynamic line rating of electric lines**." in Proc. International Conference on Power System Technology. (PowerCon), 2024, pp. 1-5. (in press)
- Participation and presented on the topic of Distribution Visualization using Smart Metering in **ICT-CEEL 2023** conference held in Bhaktapur, Nepal (11 Oct. - 13 Oct. 2023)

Projects

Automatic Feeder Automation Setup

- Developed a Hardware Setup to demonstrate the concept of feeder automation
- Demonstration of basic working of feeder automation in radial system with use of relays as circuit breaker and a sectionalizer
- Use of MATLAB Simulink to replicate the real system model and interface with help of microcontroller to visualize the system in computer demonstrating the concept of Digital Twin

Dynamic Line Rating

- Developed a Hardware Setup to demonstrate the concept of Dynamic line Rating.
- Development of data acquisition system in Labview using different sensors and micro controller
- Use of ARIMA model for forecasting based on historical data

Load Flow Analysis of Far Western Region of Nepal

- Developed the transmission model above 132kV of the far weatern region of Neapl in ETAP electrical software and MATLAB Simulink.
- Analyze the impact of fault on the region based on its location and fault types

Smart Energy Meter

- Designed and fabrication of real time monitoring of Energy Consumption and Power Factor.
- Use of Node ESP-32 microcontroller with Wi-FI module for data transmission to a dashboard for displaying electrical parameters

Smart Dustbin for Physically Disabled People

- Built a prototype for real time monitoring of garbage level and move to the required location where physically disabled people are located.

Speed Control of DC Motor with varying Temperature

- Developed a prototype for controlling the DC fan with respect to Temperature

Academic Scholarships

Merit Based: 2nd Year 1st Semester (50%), 2nd Year 2nd Semester (100%), 3rd Year 1st Semester (100%), 3rd Year 2nd Semester (100%), 4th Year 1st Semester (50%)

Extracurricular Activities

- Trainer for "**3 DAY TRAINING IN DISTRIBUTION GRID VISUALIZATION USING SMART METERING**" held at Kathmandu University, Nepal (27 Dec. - 29 Dec. 2023)
- **Project Exhibition Head** in EEPE-X 2022 organized by Society of Electrical and Electronics Engineering at Kathmandu University (1 Sept. - 16 Sept. 2022)
- Served as **Vice-President** at **Youth For Change (YFC-KU)**, a university club aiming to empower and motivate youths to find holistic approach towards leadership, and raise awareness amongst them. (2 Feb. 2022- 1 Jan. 2023)
- Served as a **Volunteer** in **Blood Donation Program** during IT Meet organized by **Youth Red Cross Circle** (28 Dec. - 29 Dec. 2018)