SATISH ADHIKARI

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📍 Kathmandu, Nepal

ELECTRICAL ENGINEER

Bio. I have completed bachelor's degree associated with Kathmandu University , Nepal. I am currently working at NEA Engineering Company , where I specialize in power transmission systems, substation design, and distribution networks.

Research interests. My bachelor degree work covers a range of topics : **Control system design, power system (generation, transmission and distribution) modeling and analysis, power electronics and programming language (C/C++) implementation**. Currently, I am interesting in exploring cutting-edge technologies like renewable energy integration, grid automation, and machine learning applications.

🎓 EDUCATION

May 2023 — August 2018

Bachelor in Electrical and Electronics Engineering, Kathmandu University, Nepal
- › Cumulative GPA : 3.64/4
- › Percentage Equivalent : 87.05 %
- › Major Courses : Electrical Machines, Power System, Power Electronics, Control System, Renewable Energy, Measurement and Instrumentation, Industrial Electrification and Control, Smart Grid and Engineering Projects

`MATLAB` `C` `C++` `ETAP` `Powerfactory Digsilent` `Dialux`

2017 — 2015

High School Level(10+2), Prasadi Academy, Nepal
- › Percentage : 79.50 %
- › Major Subjects : Physics, Mathematics, Chemistry, Biology, English

`Microsoft Office`

2015

School Leaving Certificate(SLC), Padmodaya Public Secondary School, Nepal
- › Percentage : 80.50 %

</> PROGRAMMING SKILLS

Python	● ● ● ● ●
MATLAB	● ● ● ● ○
C++	● ● ● ● ○
C	● ● ● ● ○
HTML, CSS	● ● ● ○ ○

➕ TOOLS & APPLICATIONS

- › ML : Pandas, Scikit-learn, TensorFlow, Matplotlib
- › ETAP
- › MATLAB Simulink
- › PowerFactory DigSilent
- › OpenDSS
- › PvSyst
- › DiaLux
- › AutoCAD

🖥 OFFICE SKILLS

- › LaTeX
- › MS Presentation
- › MS Excel
- › MS Word
- › MS OneNote
- › MS Project

💼 PROFESSIONAL EXPERIENCE

Present — Dec 2023

Electrical Engineer, NEA Engineering Company Ltd, Nepal
- › 132 kV Underground Transmission Line study and proposal for contract bidding.
- › Site visit and details feasibility study reports.
- › 400 kV Double Circuit West Seti Corridor transmission line feasibility analysis.
- › 132/11 kV Sunakothi GIS Substation study and preparations of general and protection SLD.
- › Surveying substations to evaluate reinforcement and upgrades to meet rising demand in Kathmandu Valley.
- › Bajura Solar Power Plant potential output power evaluation and analysis using PVSyst.
- › 🔗 : Visit Projects

`MS Office` `PVSyst` `AutoCAD` `ETAP`

Dec 2023 Jun 2023	**Associate Electrical Engineer, NEA Engineering Company Ltd, Nepal** › Load flow analysis and designed distribution system for camp facilities of Kimathanka Arun Hydroelectric Project. › Transformers sizing, cable sizing, load modelling. › 132/11 kV AIS Minbhawan Substation study and preparation of SLD. › ⧉ : Visit Projects

ETAP   AutoCAD   ArcGIS   MS Office

🖥 PROJECTS

Designing MPPT Controller for Photo-Voltaic Power Generation System

This is collaboration reserach work with bachelor's colleagues. We design Buck – Boost converter, simulate MPPT system in Simulink and develop hardware prototype for demonstration.

› Skills : MATLAB Simulink, Microcontroller, Arduino programming, 3D modelling
› ⧉ : Visit Project

Transmission Line Design

A power evacuation study was conducted for a 200 MW transmission line spanning 160 km. The study covered several key parameters, including the selection of the most economical voltage level and circuit configuration, determination of insulation disc requirements, conductor selection, voltage regulation analysis, tension and sag calculations, as well as the design of lattice towers.

› Skills : MATLAB, C programming, AutoCAD
› ⍾ github.com/satishadhikari07/Transmission-Line-Design

Load Flow and Fault Analyis Study

The overall grid of Bagmati province, Nepal was modelled in ETAP software. Load Flow analysis was done to find the voltage profile, power flows and losses in the system. The short circuit was applied in nearest bus and farthest of highest generation to find the short circuit current rating in the system.

› Skills : ETAP, Grid Modelling, Load Flow Analysis, Short Ciruit Analysis
› ⧉ : Visit Project

Protection Coordination Study

Relay Setting was calculated in each buses in accordance with load flow and short circuit analysis. The overall system was modeled in DigSilent software to validate the proper operation of relay during normal and faculty condition.

› Skills : DIgSilent, Relay Setting Calculations
› ⧉ : Visit Project

📖 PUBLICATIONS

[C1] D Khadka, S Adhikari, A Pokharel, S Marasinee, A Pathak, "Microcontroller-Driven MPPT System for Enhanced Photovoltaic Efficiency : An Experimental Approach in Nepal", in *University Scholar Conference, 3rd Edition, Kathmandu University, Nepal, 2023.*

🈁 LANGUAGES

Mother Tongue : Nepali
Others : English, Hindi

🎌 EXTRA CURRICULAR ACTIVITIES

› Participated in educating the students about basic components of electrical systems as organized by Department of Electrical and Electronics Engineering (DOEE), Dhulikhel, Nepal.
› Assisted in reviewing and editing the annual journal of DOEE.
› Volunteering, managing and fund raising for annual event EEPEX (Electrical and Electronics Projects Exhibition) and Robotics Club.
› Participation in Science Exhibition organized by Ministry of Education, Science and Technology in Dang, Nepal

💬 REFERENCES

Dr. Shailendra Kumar Jha	**Dr. Samundra Gurung**	**Dr. Kamal Chapagain**
Associate Professor	Assistant Professor	Assistant Professor
✉ shailendra@ku.edu.np	✉ samundra.gurung@ku.edu.np	✉ samundra.gurung@ku.edu.np