

## SKILLS & CERTIFICATES:

**Engineering Tools:** P-spice, MATLAB, AutoCad, ModelSim, Quartus

**Programming Skills:** Python, R, SQL, ASP. NET, C#, C++, C

**Lab test Equipment:** Vector Network Analyzer, Spectrum Analyzer, Oscilloscopes (Keysight EXR Series), Received Keysight Technologies training on Vector Network Analyzer and EXR Oscilloscope

**Data Science:** Data Mining, Data Modelling, Data Visualization, Statistical Analysis,, Predictive Modelling, Geospatial Analysis

**Material Characterization:** Scanning Electron Microscopy (SEM), Focal Ion Beam (FIB), Transmission Electron Microscopy (TEM), Electron Dispersive Spectroscopy (EDS) , Auger Electron Spectroscopy (AES)

**Web development:** Django, React, Node.js, Search Engine Optimization

## WORK EXPERIENCE:

### Youngstown State University

**Youngstown, Ohio**

*Graduate Assistant*

*Aug 2021 - Present*

- Interfaced TI's Tiva C Series microcontroller with BME688 sensor implementing I2C protocol for data acquisition system.
- Facilitated 30 students in completing their laboratory assignments in Embedded Systems lab involving ADCs, PWM Servo Control, Stepper Motors, DHT11 temperature and humidity sensor, ultrasonic sensors, and finite state machines.
- Routinely deposited thin-films of metal using DC/RF sputtering to create Photovoltaics samples.
- Instructed 30 students in Analog and Digital Circuits lab, proficiently trained them to operate Power Analyzers and Curve Tracers.
- Routinely used 4 different characterization techniques SEM, FIB, TEM, and EDS to characterize thin-film photovoltaic cells.
- Employed statistical techniques, hypothesis testing like Z-test, T-test, which resulted in statistically findings in over 90% of cases.
- Participated in conferences, presented the research work related to CdTe thin film photovoltaics.

### Pawan Solar and Electronics

**Kathmandu, Nepal**

*Project Engineer*

*May 2020- June 2021*

- Optimized power consumption techniques, load management, and effective communication to achieve a 93% satisfaction rate.
- Conducted analysis of customer feedback on power disturbances and implemented routine maintenance checks resulting in a 90% reduction in complaints.
- Recruited a team of five junior engineers to improve efficiency for a new 10KW solar project in the rural district of Darchula, Nepal.
- As a Project Leader, facilitated weekly meetings to ensure the project progressed according to the estimated timeline.

### Huawei Technologies

**Lalitpur, Nepal**

*RF Drive Test Engineer*

*May 2018 - April 2020*

- Improved performance of more than 800 sites of NCELL, one of the fast-growing telecom companies in Nepal.
- Implemented Cluster over Single Site Verification technique reduce workload which saved 65% of resources for the company.
- Remodeled the frequency reframing and successfully upgraded from 3G to LTE technology.
- Prepared performance report to evaluate problems and solve each complaint with 100% satisfactory rate.

## EDUCATION:

Master of Science in Electrical Engineering (GPA 3.9)

*May 2023 (Expected)*

**Youngstown State University (YSU)**

**Youngstown, Ohio**

Bachelor's degree in Electronics and Communication Engineering

*May 2018*

**Tribhuvan University (TU)**

**Kathmandu, Nepal**

## PROJECT(S):

- Developed an android app that scan the barcode of the students and that keep the records of student as a senior design project. (2018)
- Designed a project using Arduino that measure the temperature of the room and display in the LCD. (2017)

## LEADERSHIP/VOLUNTEER:

- Graduate representative at Student Government Association (SGA) at YSU. (Aug 2022 – Present)
- Secretary at Assessment and Enrichment Community SGA YSU (Aug 2022 – Present)
- Team Leader at Cloud Factory Nepal, Data labeling for machine learning application. (2020)

## PUBLICATIONS:

Published a journal paper on Electrochemical society "Threshold switching in CdTe Photovoltaics" ([Link](#))

*Oct 2022*

Submitted a review paper on "Electrical Contacts in Photovoltaics: A review"

*Dec 2022*

Presented a poster on spring meeting of the American Physical Society

*April 2022*