

Seeking full time Data Scientist, Software Developer, Machine Learning Engineer, RF/System Engineer position where I can apply my skill sets on Data science, ML algorithms, Computational Electromagnetics, Antenna design and my hands-on research and project experiences.

## TECHNICAL PROFICIENCIES

**Data Science Tools:** R, Python, Tableau, Power Bi, MSSQL, Hadoop, Cloudera, Pig, Hive, HBase, Git, HTML, Js, PHP, Java, ETL (Talend open Studio for data integration), MongoDB, Casandra,  
**Deep Learning Packages:** TensorFlow, Keras, Maxnet, NLTK, ScikitLearn, NumPy, Pandas, SciPy,  
**RF Electromagnetics:** CST Microwave studio, HFSS, FDTD, Comsol Multiphysics, Cadence, ADS, Meep,  
**RF Measurement Tools:** Spectrum Analyzer, Network Analyzer, Oscilloscope, Signal Generator, Time Domain Spectroscopy,  
**Computational Tools:** MATLAB, Mathematica, Maple 11, C, C++, Fortran, MPI, OPENMP, Cuda,  
**Networking Tools:** CCNA, Packet Tracer, Firewall, Router, Switch

## EDUCATION and CERTIFICATIONS

**Ph.D.** in Computational Science Candidate | Middle Tennessee State University, TN (Expected December 2019) | GPA: 4.0  
**Master of Science** in Computer Science | Middle Tennessee State University, Murfreesboro, TN (2019) | GPA: 4.0  
**Master of Science** in Electrical and Computer Engineering | University of Utah, Salt Lake City, UT (2016)  
**MSC** in Information and Communication Engineering | Tribhuvan University, Kathmandu (2013) | GPA: 4.0  
**Bachelor of Engineering** in Electronics and Communication Engineering | Tribhuvan University (2010) | GPA: 4.0  
**HADOOP Certification** | Linked in Learning  
**Building Deep Learning with Keras and TensorFlow Certification** | Linked in Learning and Udemy Lazy programmer  
**CCNA Certification** | 2010  
**Advanced CISCO Routing** | 2019 | Linked in Learning  
**Tableau** | 2019 | Linked in Learning  
**Learning R** | 2019 | Linked in Learning

## RELATED EXPERIENCE

### MIDDLE TENNESSEE STATE UNIVERSITY, MURFREESBORO, TN

January 2017- present

#### Graduate Research Assistant

- Predictive modelling and data analytic in Second Harvest Project with MTSU Data Science Institute.
- Phonocardiography data compression using discrete wavelet transform, machine learning (TensorFlow).
- Work Flow Optimization of Cloud Computing for Big Data Applications using Java and python.
- Characterization of oils and oil mixtures using Terahertz Time-Domain Spectroscopy and Matlab.
- Computational modeling of maximum length sequence multilayer and grating structure using COMSOL.

#### Teaching Assistant

- Instructor for Astronomy Lab, Computer science orientation (HTML, CSS, JS, Microsoft Excel) and Computer Language Java, CSCI 3033.

### UNIVERSITY OF UTAH, SALT LAKE CITY, UT

August 2014- January 2017

#### Graduate Research/Teaching Assistant, Advanced antenna Lab

- Design of crime scene investigation system to investigate the wireless channel state information using CST.
- Single plane Transceiver arrays for Massive MIMO Communication using CST and Matlab.
- Teaching lab for Introduction to Electromagnetics and Transmission line, and supervising student on Senior Thesis.

### TRIBHUWN INTERNATIONAL AIRPORT, KTM, NEPAL

December 2006 - August 2014

#### System Engineer

- Responsible for designing, installing, maintaining of networking, RF and Antenna for communication, navigation and Radar in air traffic control system.
- Analyze the traffic data using data visualization tools (R, Python, Tableau) and maintaining SQL Server.

### TRIBHUWAN UNIVERSITY NEPAL

February 2010- August 2014

#### Senior Lecturer/Academic Coordinator

- Conducting research and lecture class for electromagnetics, communication system, signal processing, propagation and antenna system, C, C++, computer network. CCNA instructor.

## HONORS & PROFESSIONAL SOCIETIES

### Reviewer

- ACM South East Conference 2018
- IEEE APS/URSI 2019, Session chair
- The Second International Conference on Mechanical, Electric and Industrial Engineering (MEIE2019)

Graduate student advisory council member at U of U ECE department, vice president: IEEE Utah student chapter (2016),

Full Tuition Waiver: PHD/MS/B.E.,

Travel Grant, Security Encryption Workshop, organized by Brown University, May 2019,

President of Robotics club, Kathmandu Engineering College, Nepal (2009),

Undergraduate, 1<sup>st</sup> Rank student, 2010.

## PUBLICATIONS

1. **K. N. Poudel**, D. Schurig and N. Patwari, "Spatial imaging using a communication system's channel state information," *2016 USNC-URSI Radio Science Meeting*, Fajardo, 2016, pp. 41-42.
2. **K. N. Poudel**, David Schurig, Neal Patwari, "Security Imaging Using Wifi based Channel State Information", Annual Conference | Utah Academy of Science Arts and Letters, 2016, UT.
3. **K. N. Poudel** and S. Pokhrel FDTD: A Powerful Tool In Computational Electromagnetics, Annual Conference | Utah Academy of Science Arts and Letters, 2016, UT.
4. **K. N. Poudel** and W. Robertson, "Metamaterial inspired antenna design for massive MIMO, 5G communications system," *2017 USNC-URSI Radio Science Meeting (Joint with AP-S Symposium)*, San Diego, CA, 2017, pp. 103-104.
5. **K. N. Poudel**, V. Koju and W. Robertson, "Frequency selective surfaces for microwave frequency band applications," *2017 USNC-URSI Radio Science Meeting (Joint with AP-S Symposium)*, San Diego, CA, 2017, pp. 15-16.
6. **K. N. Poudel** and William M. Robertson, "Maximum length sequence dielectric multilayer reflector," *OSA Continuum* 1, 358-372 (2018).
7. **K. N. Poudel**, Y. Gu, Time and Cost Optimization in Cloud Computing for Big Data Applications. ACM Mid-Southeast Conference, 2018.
8. **K. N. Poudel** and W. M. Robertson "Bloch surface wave excitation using a maximum length sequence grating structure", Proc. SPIE 10914, Optical Components and Materials XVI, 109140K (27 February 2019).
9. M. Chowdhury, **K. Poudel** and Y. Hu, "Phonocardiography Data Compression using Discrete Wavelet Transform," 2018 IEEE Signal Processing in Medicine and Biology Symposium (SPMB), 2018, Philadelphia, PA.
10. M. Chowdhury, **K. Poudel** and Y. Hu, "Phonocardiography Data Compression Using Discrete Wavelet Transform," *2018 IEEE Signal Processing in Medicine and Biology Symposium (SPMB)*, Philadelphia, PA, 2018, pp. 01-03.
11. **K. N. Poudel** and W. Robertson, "Characterization of Oils and Oil Mixtures using Terahertz Time-Domain Spectroscopy," *2019 USNC-URSI Radio Science Meeting (Joint with AP-S Symposium)*, Atlanta, GA, 2019.
12. **K. N. Poudel** and M. Pant, "Wireless Power Transfer for Medical Implants," *2019 USNC-URSI Radio Science Meeting (Joint with AP-S Symposium)*, Atlanta, GA, 2019.
13. **K. N. Poudel**, Performance analysis of ATC radar using pulse compression techniques, KEC Journal of science and engineering, June 2013, Vol.1.

### In Progress

14. M. Chowdhury, **K. Poudel** and Y. Hu, "Time-Frequency Analysis and Classification of PCG Signals," IEEE Access 2019.
15. **K. N. Poudel**, Y. Gu, Time and Cost Optimization in Cloud Computing. 2019 IEEE International Conference on Big Data (BigData 2019).
16. **K. N. Poudel** and W. M. Robertson "Bloch surface wave excitation using a maximum length sequence grating structure", IEEE Access, 2019.