KHEM NARAYAN POUDEL. Murfreesboro, TN, 37130 | 801-712-7990 | knparjun @gmail.com | Website

Accomplished, dedicated, innovative, and energetic Data Science and System Engineering Leader and 8+ years of system engineering experience in fast-paced technical and business environments. Seasoned in conducting high-level and complex research using various Computational Electromagnetics, machine learning algorithms, API's, and tools. Proven track record of researching, adopting, and utilizing custom mathematical tools to drive data science initiatives. Hands-on leader and collaborator with excellent communication, organization, analytical, critical thinking, and problem-solving skills. Areas of expertise include:

Data Science Software Engineering Database Design & Development Systems Design Project Management Deep Learning Digital Signal Processing AI/ML Algorithms Computational Electromagnetics Antenna Design RF system Computer Networking Router, Switch and Firewalls

Technical Skills: R, Python, Tableu, Power Bi, Hadoop, Cloudera, Pig, Hive, Hbase, Git, HTML, Js, PHP, Java, MSSQL, MongoDB, Casandra ,ETL (Talend open Studio for data integration ,Tensorflow, Keras, Maxnet, NLTK , ScikitLearn, Numpy, Pandas, SciPy, CST Microwave studio, HFSS, FDTD, Comsol Multiphysics, Advanced Design System for simulating RF and Microwave system, Matlab, Mathmatica, Maple 11,C, C++,Fortran, MPI, OPENMP, Cuda , 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 | Tribhuwan University, Kathmandu (2013) |**GPA:4.0**
Bachelor of Engineering in Electronics and Communication Engineering |Tribhuwan 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
Tableu | |2019 | Linked in Learning
Learning R |2019 | Linked in Learning

RELATED EXPERIENCE

MIDDLE TENNESSEE STATE UNIVERSITY, MURFREESBORO, TN. **January 2017- present**
Graduate Research/Teaching Assistant

- Predictive Modelling and data analytic in Second Harvest Project with MTSU Data Science Institute.
- Work Flow Optimization of Cloud Computing for Big Data Applications.
- Computational modeling of maximum length sequence multilayer and grating structure
- Phonocardiography data compression using discrete wavelet transform: Machine learning (TensorFlow).

Teaching Assistant: Instructor

- Astronomy Lab (ASTRO 1031),
- Computer science orientation, CSCI-1150(HTML, CSS, JS,HTML5,Microsoft Excel, Word),
- Computer Language Java, CSCI 3033

UNIVERSITY OF UTAH, SALT LAKE CITY, UT. **August 2014- December 2016**
Graduate Research/Teaching Assistant, *Advanced antenna Lab*

- Design of crime scene investigation system to investigate the wireless channel state information.
- Single plane Transceiver arrays for Massive MIMO Communication.
- Investigate methods to design of Biological inspired Robot
- Teaching lab for Introduction to Electromagnetics and Transmission line (ECE3300) and supervising student on Senior Thesis (ECE4900).

TRIBHUWN INTERNATIONAL AIRPORT, KATHMANDU, NEPAL **December 2006 - August 2014**
System Engineer

Designing, installing, monitoring, maintaining of

- Network system (Cisco Router, switch, firewall, and server) for Aeronautical Message Handling System.
- Telecommunication system (PABX Telephony system)
- Analyze the traffic data using data visualization tools (R, Python, Tableu, SQL).
- Communication and navigation system (VHF, HF Radio trans receiver,RADAR and antennas)

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 -Gold medal (1st Rank) student. 2010

PUBLICATIONS

1. **Khem N. Poudel**, Performance analysis of ATC radar using pulse compression techniques, KEC Journal of science and engineering,June 2013, Vol1.
2. **Khem N. Poudel,** David Schurig, Neal Patwari, "Spatial Imaging Using a Communication System's Channel State Information", IEEE APS/URSI 2016 Puerto Rico.
3. **Khem N. Poudel**, David Schurig, Neal Patwari, "Security Imaging Using Wifi based Channel State Information", Annual Conference | Utah Academy of Science Arts and Letters
4. **Khem N. Poudel** and Santosh Pokhrel FDTD: A Powerful Tool In Computational Electromagnetics, Annual Conference | Utah Academy of Science Arts and Letters.
5. **Khem N. Poudel**, William Robertson, "Metamaterial Inspired Antenna Design for Massive MIMO, 5G Communications System", IEEE APS/URSI 2017 Los Angeles.
6. **Khem N. Poudel,** Vijay Koju William Robertson, "Frequency Selective Surfaces for Microwave Frequency Band Applications", IEEE APS/URSI 2017 Los Angeles.
7. **Khem N. Poudel** and William M. Robertson, "Maximum length sequence dielectric multilayer reflector," OSA Continuum 1, 358-372 (2018)
8. **Khem N. Poudel**, Yi Gu, Time and Cost Optimization in Cloud Computing for Big Data Applications. ACM Mid SouthEast Conference, 2018.
9. **Khem N. Poudel** and William 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); doi:10.1117/12.2508184; https://doi.org/10.1117/12.2508184.
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.doi: 10.1109/SPMB.2018.8615617.
11. **Khem N. Poudel,** William Robertson, "Characterization of Oils and Oil Mixtures using Terahertz Time-Domain Spectroscopy", IEEE APS/URSI 2019 Atlanta.
12. **Khem N. Poudel,** Madhav Pant, "Wireless Power Transfer for Medical Implants", IEEE APS/URSI 2019 Atlanta.
13. M. Chowdhury, **K. Poudel** and Y. Hu, "Automatic Phonocardiography Analysis using Discrete Wavelet Transform,"International Conference on Vision, Image and Signal Processing (ICVISP2019) ,Vancouver, Canda,2019

In Progress about to Submit

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