

Surya Pusapati

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“ I am a data-driven engineer, with passion to solve real-world problems using Engineering, Software and Data Science techniques. ”

WORK EXPERIENCE

- Engineering Assistant** Sep 2023 – current
SaskTel, Regina, SK
- Plan and take necessary actions to provision network equipment in core and transport network
 - Automate few steps in equipment provisioning to push low touch provisioning
- Research Assistantship (Seasonal)** Jun 2023 – Sep 2023
University of Regina, Regina, SK
- Research Internship** Nov 2020 – Aug 2022
Ericsson, Montréal, QC
- Conducted research on optimizing 5G network systems using AI techniques
 - Published research articles on this research work
- Engineering Tutor / Graduate Teaching Assistant / Teaching Assistant** May 2020 – Dec 2022
University of Regina, Regina, SK

EDUCATION

- Master of Applied Science – Machine Learning** (GPA: 4.0/4.0) Jan 2020 – Apr 2023
University of Regina, Regina, SK
- Opted for advanced courses in Numerical Methods, Artificial Neural Networks, and Deep Learning
 - Thesis topic: Cellular Network KPI Prediction on Simulated 5G-NR V2N Traffic Dataset using Machine Learning
- Bachelor of Technology – Mechanical Engineering** (GPA: 3.64/4.0) Jul 2015 – Apr 2019
Gayatri Vidya Parishad College of Engineering (A), Visakhapatnam, AP, India
- Opted for specialization courses in Manufacturing Technology, Automobile Engineering, and Robotics
 - Project topic: Design and Fabrication of Radio-controlled Mini Rover with Audio-visual Sensors

TECHNICAL SKILLS

Data Science concepts: Descriptive and Inferential Statistics, Hypotheses Testing, Exploratory Data Analysis, Data Mining, Data Visualization, Regression Analysis, Statistical Modeling, Machine Learning, Deep Learning

Programming & Analysis: Python, C/C++, SQL, MATLAB, MS Excel

Python packages: NumPy, Pandas, SciPy, Matplotlib, Seaborn, Plotly, Scikit-learn, Keras, TensorFlow, Streamlit

Dashboards & Visualization: MS Power BI, Tableau

Software Development: PyCharm, Jupyter Notebook, Spyder, Visual Studio Code, GitHub

Documentation & Presentation: MS Word, MS PowerPoint, HTML, Markdown

Design & Drafting: AutoCAD, CATIA, Solid Works, Solid Edge

PROJECTS ON DATA SCIENCE

- Cellular Network KPI Prediction on Simulated 5G-NR V2N Traffic Dataset** Sep 2022
- Developed a Python module to ease data processing of simulation outputs
 - Developed three network KPI prediction models using Machine Learning
 - Published articles on this novel use case of Machine Learning in 5G communication
- Binary Classification of Wine Variants using Machine Learning** Apr 2021
- Developed a heatmap figure to visualize the behaviour of the Machine Learning models using Python
 - Multiple Machine Learning models are trained to classify two wine variants
- Network Monitoring and User Behavior Analysis using Neural Network** Dec 2020
- Developed two Artificial Neural Network (ANN) classifiers to predict network KPIs using IP traffic dataset
 - In Network Monitoring: Deep ANN predicts recently visited website
 - In User Behavior: Deep ANN classifies the level of traffic consumption
 - Improved the data quality using data manipulation methods in Pandas and NumPy
 - In comparison, the developed Deep ANN classifiers out-performed other Machine Learning algorithms
- Neural Network Model to Predict Spatiotemporal Patterns of users inside Buildings** Apr 2020
- Developed an ANN algorithm called MLP to predict spatiotemporal patterns of mobile device of user such as location of mobile device, type of mobile device, and time
 - Prepared the dataset for training of MLP model by using ETL methods
 - The performance of the MLP outperformed other start-of-art Machine Learning algorithms in the literature

CERTIFICATIONS

- LinkedIn : Master SQL for Data Science Jun 2022
- Udemy : Machine Learning A-Z: Python in Data Science Jan 2021
- Udemy : Statistics for Data Science and Business Analysis Aug 2020
- Udemy : Python for Data Science and Machine Learning Bootcamp Jul 2020

PARTICIPATIONS

- Elevator Pitch in Reverse Career Fair held at the University of Regina Mar 2023
- Developed `anm` package in Python to perform Advanced Numerical Methods Feb 2023
- Presented master's thesis at the Graduate Conference held at the University of Regina Oct 2022
- Presented a conference paper at the 2022 IEEE Future Networks World Forum at Montréal Oct 2022
- Lecture on "Introduction to Python" for a graduate course at the University of Regina Sep 2022
- Volunteered as International Peer Advisor at the University of Regina May 2021 - Aug 2021

SCHOLARSHIPS AND AWARDS

- FGSR Scholarly Award Mar 2023
- FGSR Graduate Student Online Conference & Travel Award Nov 2022
- URGSA Travel Award Nov 2022
- MITACS Accelerator Program Oct 2020 – Nov 2022
- UR Graduate Scholarship Aug 2020