Surya Pusapati

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SUMMARY

I'm a self-taught Data Scientist with a background in Mechanical engineering. I'm seeking a Data Analyst/Data Scientist position to utilize my academic and industrial experience to address real-world challenges by gaining insights from data using techniques of Data Science and Machine Learning. I have hands-on experience performing data analysis and developing supervised learning models on complex datasets. I'd be delighted to put my engineering and data analysis skills to create innovative solutions for the business needs of an organization.

WORK EXPERIENCE

Research Intern Nov 2020 – Aug 2022
Ericsson, Montréal, QC

- Conducted research on optimizing 5G network systems using AI techniques
- Implemented several Machine Learning and Deep Learning methods such as KNN, Decision Tree, Random Forest, XGB, SVM, MLP, RBFN, CNN, and LSTM on 5G datasets
- Published research articles on this research work

Engineering Tutor Oct 2022 – Dec 2022
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 – Mar 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, MS Excel, SQL, MATLAB
Python packages: NumPy, Pandas, SciPy, Statsmodels, Matplotlib, Seaborn, Plotly, Scikit-learn, Keras, TensorFlow, PyTorch, Scrapy, BeautifulSoup, 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

- 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