SOUMIK SARKER ANIK

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SUMMARY

Master's graduate in Software Engineering with almost three years of research and industry experience in the field of machine learning and data science. Highly proficient in deep learning models and fuzzy logic systems. Co-author of three journal articles and two conference papers with a focus on predictive modeling and the analysis of complex geospatial, healthcare and time series datasets. Fast learner, self-motivated, and tech enthusiast with excellent analytical and coding skills proven through work experience.

EDUCATION

Memorial University of Newfoundland
Masters of Applied Science, *Software Engineering*
2023- 2024
St John's, NL

North South University
Bachelor of Science, *Computer Science - GPA 3.77/4.00 (Magna Cum Laude)*
2017-2021
Dhaka, Bangladesh

WORK EXPERIENCE

Machine Learning Engineer (Intern)
09/2024-12/2024

Exxon Mobil Corporation and Memorial University
- Developed and implemented unsupervised ML models for anomaly detection in industrial machinery time series data.
- Performed necessary feature engineering and preprocessing steps on the data to enhance model performance
- Utilized Azure Databricks and Azure Data Explorer (ADX) for data extraction and contributed to designing the solution architecture.

University Research Assistant
09/2019-02/2022

North South University
- Published three journal articles and two book chapters showcasing expertise in advanced ML algorithms across domains, with over 60 citations.
- Implemented different classification, clustering, and hybrid neural network models with my research team of five people
- Conducted research in diverse domains, including healthcare analytics (COVID-19 transmission modeling), geospatial analysis (flood risk assessment), and transportation safety (accident severity prediction).

University Teaching Assistant
05/2019-10/2020

North South University
- Assisted respective faculty members in preparing lesson plans, graded assignments, and quiz scripts for each section
- Gave one-to-one consultations to over 30 students about the topics covered in classes

PUBLICATIONS

- (2022) National-scale flood risk assessment using GIS and remote sensing-based hybridized deep neural network and fuzzy analytic hierarchy process models: a case of Bangladesh. *Geocarto International*.
- (2022) Integration of fuzzy logic in the SEIRD compartmental model for the analysis of intervention and transmission heterogeneity on SARS-CoV-2 transmission dynamics. *International Journal of Modern Physics C*.
- (2022) A Theoretical Linguistic Fuzzy Rule-Based Compartmental Modeling for the COVID-19 Pandemic. *International Journal of Fuzzy System Applications*.
- (2021) Study of Hybridized Support Vector Regression Based Flood Susceptibility Mapping for Bangladesh. *IEA/AIE 2021*.
- (2020) Study of Machine Learning Techniques on Accident Data. *ICCCI 2020*.

SKILLS

- Programming Languages: Python, R, SQL
- Machine learning and NLP: scikit-learn, tensorflow, pytorch,NLTK
- Data Visualizations: Matplotlib, Seaborn, PowerBI
- MLOps and DevOps: CI/CD pipelines, MLflow, version control(Git), Azure Databricks, Azure Data Explorer (ADX)
- Domain Specific: Healthcare Data Analytics and Modelling, Geospatial Data Analysis, Hybrid ML models, Time series Data Analysis, Predictive Modelling, Anomaly Detection
- Soft Skills and Collaboration: Problem Solving, Teamwork and Collaboration, Self Motivated, Research and strategy

COURSEWORKS

- Neural Network
- Theory of Fuzzy Systems
- Data Mining
- Theory of Computation
- Computer Vision
- Advanced Data Network