Sadat Shahriar

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PROFILE SUMMARY

Highly passionate and adept researcher specializing in Machine Learning, Natural Language Processing, and Data Science with **five** years of experience in crafting state-of-the-art solutions. **No sponsorship is required.**

SKILLS

Machine Learning

Supervised Learning (Linear regression, Logistic regression, SVM, Random Forest, XGBoost), Unsupervised Learning (PCA, K-means clustering), Neural Networks (Vanilla, LSTM, GRU, CNN)

Programming Languages and Tools

Python (Pandas, NumPy, Scikit-Learn, PyTorch, Keras, Tensorflow, Matplotlib, Seaborn, spaCy, NLTK), C++, R, Matlab, shell scripting, SQL, Cloud Services (AWS, Google Cloud), Git, MS Excel

Domain Expertise

Natural Language Processing (tf-idf, word embeddings, Attention, Transformers, Language Models like BERT, GPT-2,3, LLM Llama), Probability and Statistics, Data Preprocessing, Feature Engineering

EXPERIENCE

Graduate Research Assistant   *University of Houston, TX* | Jan 2021 - present
– Led impactful research initiatives for web-based deception detection, deploying intricate **Machine Learning** paradigms. encompassing knowledge transfer, multi-task learning, and adept utilization of **Natural Language Processing** techniques.
– Orchestrated **end-to-end** processes, from meticulous data collection and processing to experiment design, model training, and implementation of cutting-edge technologies such as **Transformers**, **BERT**, **SBERT**, **CNN**, and **LSTM.**
– Achieved a significant performance improvement of up to **18%** over cutting-edge methods, which led to **six papers** across renowned conferences including RANLP, SOCINFO, WBC (Best Paper), and SemEval (ACL '23). Full project list

Guest Experience Analyst   *Hampton Inn and Suites, NY* | June 2020 - Dec 2020
– Crafted data-driven solutions for **sales enhancement** and **revenue generation** employing **Random Forest**, **XGBoost**, and **SVM**.
– Developed **advanced ML**-based forecasting tools, utilizing **Regression Tree** and **LSTM**, to address complex business challenges
– Engineered a solution resulting in a remarkable **23%** increase in sales compared to the previous fiscal year.

Junior Data Scientist   *Global Data Management, NJ* | Feb 2020 - Jun 2020
– Conducted in-depth **Statistical Data Analysis**, employing **Hypothesis Testing** and **ANOVA**, to extract meaningful insights.
– Constructed an **AutoML** system proficient in both **regression** (**Ridge** and **Lasso**, **SVR**, **RF** regressor) and **classification** (**Logistic Regression**, **SVM**, **RF**, **XGBoost**) with integrated explainable **feature importance** for model interpretability.
– Crafted a data-driven solution for building a **digital banking** tool, resulting in a notable **10%** growth in app users.

Graduate Assistant (Research and Teaching)   *University at Albany, SUNY, NY* | Jan 2018 - Dec 2019
– Designed a conversation-history-guided **data-driven** novel emotion forecasting technique for enhancing user satisfaction.
– Improved timely machine responses for virtual agents by building a classical Deep Learning-based system using **BiLSTM.**
– Achieved a performance improvement of **4.81%** over classical techniques. Published **paper** at a prestigious conference (FG'23).

EDUCATION

PhD in Computer Science
Jan 2021 - Present
University of Houston, TX

MS in Electrical and Computer Engineering
Jan 2018 - Dec 2019
University at Albany, SUNY, NY

BSc in Electrical and Electronic Engineering
Feb 2011 - May 2015
Khulna University of Eng. and Tech., Bangladesh

ACCOMPLISHMENTS

– **Conference, Talks, and Awards:** Presented research at **eight** conferences, talked in **three** seminars. One **Best Paper Award**. papers
– **Teaching, Supervision, and Leadership:** Taught courses with avg. student satisfaction **4.7/5**, supervised students (ML and NLP)