Protik Nag

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Education

University of South Carolina **August, 2023 − Present**
Ph.d Student, Computer Science and Engineering

Shahjalal University of Science and Technology **January, 2016 − December, 2019**
Bachelor in Science, Computer Science and Engineering

Research Interest

Graph Neural Network with Reinforcement Learning for Propagation Minimization
- Developed a graph neural network model in a supervised learning setup to minimize rumor propagation in a network. This model can predict which nodes are useful to block so that infected nodes with rumor cannot propagate information to other nodes.
- Planning to implement the graph neural network model in a reinforcemnet learning setup to do further exploration.

Continual Learning on Graph Neural Network
- Currently exploring different benchmarking methods on graph continual learning.

Selected Publications and Preprints

"Fundamental Machine Learning Routines as Quantum Algorithms on a Superconducting Quantum Computer.", Sristy Sangskriti, **Protik Nag**, Summit Haque, *arXiv preprint arXiv:2109.09522.* [**URL**]

"A Closer Look into Paintings' Style Using Convolutional Neural Network with Transfer Learning.", **Protik Nag**, Sristy Sangskriti, Marium-E-Jannat, In *Proceedings of International Joint Conference on Computational Intelligence (pp. 317-328). Springer, Singapore.* [**URL**]

"Quantum Noise And Measuring Quantum Distance For NISQ Circuits.", Sakibul Islam Sazzad, **Protik Nag** *TechRxiv preprint TechRxiv:21791987.* [**URL**]

Experience

Therap (BD) Ltd. **July, 2020 − Present**
Software Engineer, Machine Learning *Dhaka, Bangladesh*
- Developed and deployed a machine learning model that can predict the probability of a severe injury or seizure of a patient in a specific period based on preceding data: used Cox Proportional-Hazard (CPH) and Accelerated Failure Time (AFT) model to develop this.
- Applied different statistical analyses and feature engineering to find similarities between multiple trends.

Pipilika, Bangla Search Engine **September, 2019 − March, 2020**
Intern at Research and Development *Sylhet, Bangladesh*
- Developed and integrated an automated crawler using Scrapy to crawl top news from prominent daily newspapers.
- Fine-tuned a machine learning model that used the latest crawled news to extract keywords and summarise them to display on the website.

Technical Skills

Languages: Python, C++, SQL
Technologies/Frameworks: PyTorch, Keras, Qiskit