Md. Zarif Ul Alam

CS UNDERGRAD

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Education

Bangladesh University of Engineering and Technology (BUET) *Dhaka, Bangladesh*

B.Sc. in Computer Science and Engineering *April 2018 - Present*

- Currently in Final Year
- CGPA : 3.80/4

Skills

Programming Languages	C++ , Python , Java , C# , Go
Frameworks	Django, TensorFlow, Keras, PyTorch, Unity, React
Database	Oracle, PostgreSQL, MySQL
Tools	Git , Bash , Docker

Research

Occam's Razor Strikes Again: Revisiting Short-Text Stream Clustering with Latest Sentence Embeddings *Submitted to **ARR***

Supervisor : Dr. Shubhra Kanti Karmaker (Auburn University), Dr. Anindya Iqbal (BUET) *May 2021 - Jan. 2022*

- We proposed a new method called One Pass Sentence Embedding Clustering (OPSEC) - an online one-pass algorithm that leverages similarity scores based on sentence embeddings to cluster short texts. Experiments with popular benchmark data-sets demonstrate that sentence-embeddings can outperform existing state-of-the-art short text stream clustering methods in terms of clustering accuracy and quality.

Application and Interpretation of Ensemble Methods for Darknet Traffic Classification

Supervisor : Md. Toufikuzzaman (BUET) *Dec. 2020*

- We successfully applied ensemble machine learning methods on the recently published CIC-Darknet2020 dataset to distinguish Darknet traffic apart from the Benign ones (with 98% accuracy) and further identify the type of application running beneath the Darknet traffic(with 97% accuracy)
- Besides, we adopted a game-theoretic approach to show the impact of the features and interpret the output of the machine learning models to better understand the behavior of the Darknet traffic.

Work Experience

ICT Cell, BUET *Part-time*

Software Developer *Dec. 2021 - Present*

- Creating a custom software to make advance payment for the office of Directorate of Advisory, Extension and Research Services (DAERS)

Xu Lab, Carnegie Mellon University *Remote*

Research Intern *Jan. 2022 - Present*

- Working on biomedical image segmentation

Big Data Intelligence (BDI) Lab, Auburn University *Remote*

Research Intern *May 2021 - Jan. 2022*

- Worked under Shubhra Kanti Karmaker, Assistant Professor, Auburn University, Alabama on Short Text Stream Clustering

Unilever *Part-time*

BizLearner (Machine Learning), Unilever Forecast Engine *Nov. 2021 - Dec. 2021*

- Worked with a team that developed a new sales forecasting model for Unilever Bangladesh

Other Experience

Kaggle *zarif98sjs ↗*

Competition Medalist *Dec. 2020 - Present*

- Working on real life ML and DL problems, by collaborating with people all over the world
- **Silver Medalist**, *G2Net Gravitational Wave Detection* : Worked on finding Gravitational Wave signals from the mergers of Binary Black Holes
- **Top 12 %**, *Shopee - Price Match Guarantee* : Applied machine learning to build a model that predicts which items are the same products
- **Top 12 %**, *Rock, Paper, Scissors* : Used Reinforcement Learning to create an AI for the famous Rock, Paper, Scissors game
- **Top 14 %**, *Cassava Leaf Disease Classification* : Classified Cassava Leaf Disease, which helps farmers to quickly identify diseased plants, potentially saving their crops before they inflict irreparable damage

Projects

IntDesk ○

Full Stack Software Development, React, Django REST Framework, Docker *August 2022*

- A tech interview preparation platform. Here the users can not only solve problems that are asked in interviews of different software companies, but also can take assesments and earn different badges to showcase their skills. They can also discuss about interview problems and many more topics!

DealFinder ○

System Design *April 2022*

- A platform where you can find all the latest tech deals and offers. Designed the system ground-up by building BPMN, Class & ER Diagram, Collaboration Diagram, Sequence Diagram and Mock UI. Also implemented a demo module.

MooBot ○

Python, Discord API, Graph API *April 2021*

- Created a notification system for Moodle. Moodle doesn't come with built-in notification system. So I created one, synced with a discord bot. This helped my fellow university students to get quick notification from Moodle

Yet Another C Compiler ○

Flex, Bison, Compiler Design *March 2021*

- Made a subset C Compiler using flex and bison. Also implemented a lot of compiler code optimization

innOcity ○

Web Development , Database , Django , Oracle *Dec. 2020*

- Created a hotel booking platform using Oracle database and Django framework

T-Rex On Mars ○

Unity Game Engine *Aug. 2020*

- Recreated the old classic game T-Rex from scratch using Unity

Durbeen ○

JavaFx , Java *Jan. 2019*

- Created a visual programming platform for kids in my mother language Bangla. Highly inspired from MIT's Scratch

Honors & Awards

Community Competition Creator Prize	Won 5000$ award for best community competition, DL Sprint ↗	*Kaggle*
Silver Medal	G2Net Gravitational Wave Detection Competition ↗	*Kaggle*
Dean's List Award	Received Dean's List Award in all terms	*BUET*
University Merit Scholarship	Received University Merit Scholarship in 2 terms	*BUET*
Rated 1900+	CodeChef ↗	*CodeChef*
Finalist	CodeSamurai Hackathon: 2019	*Dhaka University*
First Runners Up	Cloud Computing Hackathon	*BUET CSE Festival*