

HABIBUR RAHMAN

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EDUCATION

M.Sc. in Computing Science, GPA: 3.8/4
UNIVERSITY OF ALBERTA

Jan 2021 – Sep 2023
EDMONTON, AB, CANADA

B.Sc. in Computer Science & Engineering, GPA: 3.77/4
RAJSHAHI UNIVERSITY OF ENGINEERING & TECHNOLOGY

Mar 2013 – Dec 2017
RAJSHAHI, BANGLADESH

EXPERIENCE

Machine Learning Developer
AWELE TECHNOLOGIES INC.

Feb 2023 – Present
EDMONTON, AB, CANADA

- Developed a recommendation-based algorithm to predict the best possible shipping routes with the highest customer satisfaction, improving route accuracy by 50% and reducing shipping costs by optimizing cost, service time and carrier ratings.
- Created the ML API on Django and deployed it on Heroku, ensuring high availability and scalability.
- Language:** Python, JS **Tool/Tech:** PyTorch, Heroku, Django, React, NodeJS, Agile

Graduate Research & Teaching Assistant
UNIVERSITY OF ALBERTA

Jan 2021 – Sep 2023
EDMONTON, AB, CANADA

- Introduced a novel variant of the simulated annealing algorithm for addressing program synthesis tasks that leverage a Graph Neural Network (GNN) for sampling a node from the Abstract Syntax Tree (AST), which is then mutated to generate a new program.
- Led undergrad lab for the *Practical Programming Methodology* course by preparing lab scripts, evaluating submissions, and helping students solve exercise problems.
- Language:** Python, C, C++, Bash **Tool/Tech:** PyTorch, Linux, GNN

Software Engineer

Jul 2019 – Dec 2020

SAMSUNG R&D INSTITUTE BANGLADESH

DHAKA, BANGLADESH

- Contributed to drawing SDK for Samsung Notes in C++, following Agile methodology throughout the development process.
- Implemented the new tag feature for Samsung Notes V3.X from concept and developed an internal automation tool to convert Android localization strings for the Windows platform, reducing string processing time from 120 minutes to 120 seconds.
- Language:** C++, C# **Tool/Tech:** UWP, WPF, Agile

PROJECTS

Synthesizing Libraries of Programs by Optimizing an Auxiliary Function

Dec 2021 – Sep 2023

- Proposed an approach by augmenting the program library and guiding the bottom-up search by optimizing auxiliary functions for string manipulation and reverse drawing to generate high-quality programs.
- Language:** Python, **Tech:** PyTorch, DNN, BUS

Debiasing Multiclass Demographics in Language Models

Sep 2021 – Dec 2021

- Implemented a new regularizer to debias multiclass demographics in language models like BERT, which reduced the biases for several individual classes within a demographic
- Language:** Python, **Tech:** BERT, PyTorch, DNN **Repo:** akashsara/debiasing-language-models

Data Augmentation in NMT: A Case-study for English to Portuguese

Jan 2021 – Apr 2021

- Developed a new method for data augmentation in translation tasks by evaluating its performance on Recurrent Neural Network with LSTM and Transformer.
- Language:** Python, **Tech:** LSTM & BERT, **Repo:** habibrahmanbd/Data-Augmentation-in-NMT

How is Testing Related to Single Statement Bugs?

Jan 2021 – Apr 2021

- Predicted a weak to moderate correlation (r-value **0.40**) between test coverage and single statement bugs by evaluating **25** open-source maven-based java projects
- Suggested more unit tests and increasing the test coverage to mitigate the single statement bugs by at least **10%**
- Language:** Python, **Repo:** habibrahmanbd/SSBandTesting

HACKATHONS / COMPETITIVE PROGRAMMING

- 4th place among 15 teams at University of Alberta Programming Contest Mar 2022
- 6th place among 69 participants at A Perfect Fit: HackerEarth ML Challenge Sep 2021
- 48th place among 966 participants in the Codechefs' May Cook-Off 2016
- 1st place among 20 teams from Rajshahi Division at ACM - ICPC Dhaka Regional 2016

TECHNICAL SKILLS

- Skills & Tools:** Tableau, Jira, Jupyter, Cluster, Linux, Azure, Data Studio, PowerBI, DSA, OOP, CI/CD, Git, Perforce, Agile
- Languages:** Python, R, SQL, C/C++ , C#, Java, HTML, CSS, PHP, Bash, JS
- Libraries:** Numpy, Scikitlearn, Matplotlib, Pandas, TensorFlow, PyTorch, React, NodeJS