Curriculum Vitae - Md Mohaiminul Islam

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EDUCATION

2016 - 2021	Bachelor's Degree in Computer Science and Engineering from Bangladesh University of Engineering and Technology(BUET) (CGPA: 3.55/4.0)
2015	Higher Secondary School Certificate from Chittagong College (GPA: 5.0/5.0)

PROFESSIONAL EXPERIENCE

Lecturer,   United International University(UIU), Dhaka   **March 2022 - present**

- Instructed several undergraduate courses -
    – CSE 4495 : Software Testing and Quality Assurance
    – CSE 2215 : Data Structure and Algorithms I
    – CSE 1115 : Object Oriented Programming
    – CSE 2213 : Discrete Mathematics
    – CSE 3521 : Database Management Systems
    – CSE 3422 : Software Engineering
    – CSE 3422 : System Analysis and Design
    – CSE 2116 : Advanced Object Oriented Programming
    – CSE 1112 : Structured Programming Language.
    Other duties include-
- Supervising Final Year Design (FYDP) projects.
- Academically advising more than 150 students.

Software Engineer,   REVE Systems, Dhaka   **Mar 2021 - Mar 2022**
- Full stack developer working on spring boot, vue js, MySQL, MongoDB
- Implemented a semi-microservice-based architecture for existing systems.
- Developed, implemented, and tested secure REST APIs.

PUBLICATION

- M. S. B. Siddiqui, **M. M. Islam**, and M. G. R. Alam, *Divide2Conquer (D2C): A Decentralized Approach Towards Overfitting Remediation in Deep Learning.* In Proceedings of 2024 International Conference on Big Data (BigData), IEEE, Washington DC, USA, 2024. [paper] (acceptance rate of 19.7%).

- **M. M. Islam** and A. B. M. A. A. Islam, *Disparity-Aware Federated Learning for Intrusion Detection Systems in Imbalanced Non-IID Settings*, In Proceedings of the 10th 2023 International Conference on Networking, Systems and Security (10th NSysS 2023), ACM, Khulna, Bangladesh, 2023. [paper] (acceptance rate of 22%).

- **M. M. Islam**, F. Tanvir, S. Ahmed, N. Sadeq, M. A. Adnan, *Automated Audio-visual Speech Corpus Creation From Publicly Available Sources For Bangla Language.* [preprint]

Research Experience

Research Fellow, Project: *"Attacks on Visual Language Models"*
- Working with Dr. Wei Peng on red teaming text-to-image diffusion models. Our objective is to work towards more interpretable and transferable prompt tuning techniques used to debug safety features placed on visual language models. This project is supported by Fatima fellowship organized by HuggingFace .

Project: *"Understanding digital literacy among older adults in the global south"*
- This project aims to explore the impact of digital literacy among different demographic population through their individual experience in the digital space. The project received a grant under *UIU-LCT* fund. I am working with Dr. Novia Nurain on this project.

Project: *"Distributed learning towards overfitting remediation in deep learning tasks"*
- We are working towards developing decentralized learning techniques that aims to tackle overfitting in a wide array of deep learning tasks such as image processing audio and text classification etc. This project also received funding from Institute for Advanced Research at UIU under grant UIU-IAR-02-2022-SE-06.

Undergraduate Thesis
- Worked on automatic curation of data for Bengali audio-visual speech recognition from publicly available resources.

Selected Academic Projects

Multi-Objective Symbolic Regression using Genetic Algorithm
- Academic project for CSE6807: Evolutionary Algorithms course. NSGA-II was used to find the optimal symbolic models in terms of the accuracy and interpretability across several benchmark synthetic and real-world regression datasets. [Code]

A Federated Learning-based NIDS System
- Academic project for CSE6813: Network Security course. An MLP trained in a federated learning approach on NSL KDD Dataset. [Code]

World's Hardest Game Learner
- Academic Group project for CSE472: Machine Learning Sessional(Undergrad).A self-learning agent was trained using reinforcement deep-Q learning algorithm to avoid enemies and reach it's goal. [Code]

A Virtual Simulation of Different Ping Flood Attack Strategies
- Academic project for CSE406: Computer Security. A network of linux virtual machines was used to demonstrate different ping flood attack schemes. [Code] [Report]

Online Marketplace
- E-commerce website built on Laravel framework. [Code]

Standardized Test Scores

IELTS Academic   Nov 2023
– Overall band: 8 (Reading: 7.5, Listening: 8.5, Speaking: 8.5, Writing: 7)

GRE   Sep 2022
– Quantitative: 167(87th %), Verbal: 159(81st %), AWA: 4.0

TOEFL IBT   Nov 2021
– Total: 111 (Reading: 29, Listening: 29, Speaking: 29, Writing: 24)

Skills

Programming: Java, C/C++, Python, PHP, Assembly, Matlab
Databases: MySQL, MongoDB, Oracle
Scripting: HTML, CSS, Javascript, LaTeX, markdown, shell
Data Science Frameworks: Pytorch, OpenCV, Scikit-learn, Tensorflow
Development Frameworks: Spring boot, Laravel, Vue, React native
UI/UX Design: Figma
Project Management: JIRA, trello
Version-Control: Github, Gitlab

Awards and Honors

Fatima Al-Fihri Predoctoral Fellowship
- Recepient of Fatima Al-Fihri fellowship 2024 cohort.

IAR grant
- Received a grant of 490,000 BDT from Institute for Advanced Researche(IAR) at United International University .

LCT grant
- Received a grant of 60,000 BDT from UIU LCT project.

Winner, NPHO
- Secured a *top ten* spot at *National Physics Olympiad* and selected for national physics camp.
- Champion at *Divisional Physics Olympiads* four times(2011-2014).

Winner, BDMO
- Champion at *Divisional Mathematical Olympiad* three times (2012-2014).

Winner, BDIO

Higher Secondary Scholarship

Co-Curricular Activities

- Participated and Secured a *top 30* spot in first ever nation-wide CTF contest organized by BGD e-GOV CIRT.
- Participated in National Physics camp.
- Member of the Academic team in 7th National Physics Olympiad.
- Volunteered at Badhan, BUET Zone
- Founded *Paradaox Physics School* in Chittagong.

References

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