MD HASIBUL HUSAIN HISHAM

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RESEARCH INTEREST

Adversarial Machine Learning — Security and Privacy — Human Centered Computing — Cyber Security — Software Security — Applied Machine Learning

EDUCATION

Bangladesh University of Engineering & Technology *B.Sc.*
(2017-2022)
Department of Computer Science & Engineering
CGPA: *3.79* (Last two semesters CGPA: *3.90*)
University Merit Scholarship- 2017, 2018, 2021
Dean's List Scholarship- 2018, 2019, 2021

Notre Dame College *HSC*
GPA: *5.00* (out of *5.00*)
Board Merit Scholarship - 2016

The Flowers KG & High School, Moulvibazar *SSC*
GPA: *5.00* (out of *5.00*)
Board Merit Scholarship - 2014

PUBLICATION

CORONOSIS: Corona Prognosis via a Global Lens to Enable Efficient Policy-making Both at Global and Local Levels *(COMPASS '22)*
Link: https://dl.acm.org/doi/10.1145/3530190.3534831
Supervisor(s): Dr. Sriram Chellappan, Dr. A. B. M. Alim Al Islam

SUBMITTED DRAFTS

Gene panel design for spatial transcriptomics with prioritized gene sets
Preprint Link: https://www.biorxiv.org/content/10.1101/2022.09.25.509418v1
Currently **submitted** to **Genome Biology**, waiting for review
Supervisor(s): Dr. Md. Abul Hassan Samee, Dr. Atif Hasan Rahman

Investigation on changes in COVID-19 sentiments over social media
Under Review: ACM CHI Conference on Human Factors in Computing Systems 2023
Supervisor(s): Dr. Sriram Chellappan, Dr. A. B. M. Alim Al Islam

ONGOING RESEARCH WORKS

Prompt Engineering for Program Comprehension Tasks: A Survey Story
Working on Vulnerability Detection and Crypto-api Misuse Detection tasks
Supervisor(s): Md Latif Siddiq Sunny, Joanna C. S. Santos

WORK EXPERIENCE

Bangladesh University of Engineering and Technology *19th November - Present*
Lecturer
Courses Taken: CSE102: Introduction to Programming, CSE318: Artificial Intelligence, CSE472: Machine Learning

Optimizely *December 2022 - Present*
Software Engineer
Got extended training on Git, Microservice, Docker, Basic AWS, Node, React, Clean Code Practises, etc. Currently working on a project on Angular to React Migration, in which we are converting the entire system's legacy Angular code base to React.

Dynamic Solution Innovators *February 2022 - April 2023*
Junior Software Engineer, Intern
Used Cypress to write end-to-end Automated Tests for IEIMS that is going to be utilized by Secondary and Higher Secondary students all over the country.

Free Pixel Games Ltd. *December 2020 - January 2021*
Data Analyst Intern
My main role was to analyze the Android and iOS games data followed by interpreting and spotting patterns, trends, and correlations in the data. I used Tableau and Google Data Studio for fetching and analyzing the data from their database.

NOTABLE PROJECTS

Everybody Dance Now

- Pose estimation from dance videos

- Image-to-Image translation between two subjects in a Generative Adversarial Networks(GAN) technique using pose as an intermediate representation

CORONOSIS (Live)

- A Full-Stack (MERN) web-based Dashboard for Visualizing Covid Data and Prediction

- Mainly worked in Data analysis, partially in Frontend team

- We got *16716* unique visitors during the pandemic period. Our work also got published as a Short Paper in COMPASS 2022

Port Scanning with OS Detection

- Demonstrated a cyber attack with port scanning to exploit a vulnerable target system

- Enlisted the open ports along with the OS running in the target system

Wordle Solver

- Helper aimed to solve the wordle game given current state

- Used the helper to create an automated solver which can guess 96.72% of all the Wordle words within 6 attempts

- Solver could guess all the wordle words within an average of 4.39 attempts

SoccerBoard (Live)

- A Full-Stack (MERN) Football Club Management System which would increase the efficiency of a Manager upto 150%

- Worked in both Frontend and Backend of certain modules

Lines of Action

- AI zero-sum game, adversarial search
- Both human vs human and human vs ai mode, playable in different board size

ATMega FireFighter (Live)

- Hardware Fire Detection and Extinguish System
- Implemented using ATMega32, GSM controllers, and servo motors

ACCOMPLISHMENTS

KnightCTF 2022 (international)
Team Accomplishment, stood 49th among 752 other teams

BGD e-GOV CIRT Inter-University Cyber Drill 2021
Team Accomplishment, Team Leader, stood 5th (scorewise 2nd) among 287 universities

Flag Hunt 2021 (CTF_BD)
Team Accomplishment, Team Leader, stood 5th among 300 teams

Blockchain Olympiad Bangladesh
Finalist
Project: VacTrace, Blockchain based Monitoring & Controlling System of Covid-19 Vaccines

Hult Prize on campus - 2018
Finalist

National High School Programming Contest - 2016
Regional Winner

Regional Math Olympiad
2014: 1st runner-up
2012: 2nd runner-up

TECHNICAL SKILLS

Language	Python, Java, C, C++, Javascript, Assembly, R
Frameworks	NodeJs, React, Tensorflow, Pytorch
Tools & Softwares	Linux, Autopsy, Wireshark, Burpsuite, Postman, Latex, Cisco Packet Tracer
Database	MongoDB, MySQL, PostgreSQL
Version Control	Git

ORGANIZATIONAL ACTIVITIES

IEEE BUET Computer Society *April 2020 - May 2022*
Treasurer
Problem Setter at *IEEE BUET CS Capture The Flag: Super League*, hosted workshops and seminars

BUET Dance Club *March 2020 - May 2022*
Organizing Secretary
Founded one yearly event (Groove-on) for freshers, organized the YouTube channel of the club