

MD HASIBUL HUSAIN HISHAM

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RESEARCH INTEREST

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

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>

submitted to **Genome Biology**, currently **addressing reviewer's comments**

Supervisor(s): Dr. Md. Abul Hassan Samee, Dr. Atif Hasan Rahman

A Bimodal Longitudinal Investigation on Changes in Sentiments over Social Media Interactions owing to COVID-19 Pandemic

Currently submitted in *Technological Forecasting and Social Change*

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

November 2022 - April 2023

Lecturer (adjunct)

Courses Taken: CSE102: Introduction to Programming, CSE318: Artificial Intelligence, CSE472: Machine Learning

Optimizely

June 2022 - Present

Software Engineer

Got extended training on Git, Microservice, Docker, Basic AWS, Node, React, Clean Code Practises, etc. Worked on a project on Angular to React Migration, in which we are converting the entire system's legacy Angular code base to React. Currently working in Platform team where we define the coding policy of the system, address the system's old tech debts, and resolve any unattended bugs.

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