MD HASIBUL HUSAIN HISHAM

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RESEARCH INTEREST

Applied Machine Learning — Medical Imaging — Human Centered Computing

EDUCATION

University of Utah   *Ph.D.*
(2017-2022)
Department of Computer Science & Engineering

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