Kazi Noshin

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Research Interest

Explainable Artificial Intelligence/Machine Learning/Deep Learning – Fair AI – Medical AI – Health Informatics

Education

University of Virginia *Charlottesville, USA*
Ph.D. in Computer Science *August 2023 – Present*

Bangladesh University of Engineering and Technology (BUET) *Dhaka, Bangladesh*
Bachelor of Science in Computer Science and Engineering *Feb 2017 – May 2022*
- CGPA: 3.68/4.00
- Last two-year CGPA: 3.84/4.00

Work Experience

University of Asia Pacific *Dhaka, Bangladesh*
Lecturer *Aug 2022 - June 2023*
- **Courses Teaching**:
    - Structured Programming (C)
    - Introduction to Computer Science and Programming Methodology Lab
    - Software Development
- **Responsibilities**:
    - Efficient planning of assignments to enhance the student's ability to understand computer basics.

BUET-Japan Institute of Disaster Prevention and Urban Safety *Dhaka, Bangladesh*
Research Assistant
Supervisor: Dr. Mohammed Eunus Ali (BUET) *July 2022 - Jan 2023*
- **Purpose**:
    - Improvement of Earthquake Early Warning System using graph attention networks.
    - Prediction of earthquake intensity in different regions using a relatively small amount of earthquake receiver station records.

Bangladesh University of Textiles *Dhaka, Bangladesh*
Lecturer (Part-time) *June 2022 - July 2022*
- **Courses Teaching**:
    - Structured Programming (C)
- **Responsibilities**:
    - Effective delivery of course contents to make the student's able to understand C basics.

Research Projects

Automated Analysis of Parkinson's Disease (PD) Characteristics and Severity Based on Videos Collected via a Web-based Platform (B.Sc. Thesis) (PDF) *2021 - 2022*
Supervisor: Dr. Mohammad Saifur Rahman (BUET)
External Collaborators: Dr. Ehsan Hoque (University of Rochester, US), Dr. Imran Sarker (NINH, BD)
- Building a simple automated online PD screening tool by modifying an existing web-based application that can capture audio and video data from participants to identify Parkinson's Disease (PD) in thousands of undiagnosed people in Bangladesh.
- Providing patients the opportunity for frequent assessment/monitoring without having appointments with neurologists or requiring them to travel to a healthcare facility.
- Contributing to the ongoing study to improve the condition of the 10 million people worldwide who currently have Parkinson's disease.

Actionable analytics of cancer *2021-Present*
Supervisor: Dr. Mohammad Saifur Rahman (BUET)
External Collaborator: Dr. Abu Zafer Mohammed Dayem Ullah (Barts Cancer Institute, UK)
- Identifying the association of various clinical or molecular factors with the survival of patients diagnosed with cancers.
- Developing a gene mutation-based scoring system for categorizing patients according to their survival potential using machine learning techniques.

Notable Projects

WBC classification

Deep Learning Project *2022*

- Through this project white blood cells are classified into four subtypes from the image data of blood cells.
- Framework : Keras
- Github link

CNN from Scratch

Deep Learning Project *2022*

- Implemented a convolutional neural network from scratch for an image classification task.
- Language: Python
- Github link

DNS cache poisoning

Network Security Project *2021*

- An attacker can poison the DNS cache and direct users to a false website in order to gain personal information which will be a phishing attack.
- Language: C, Tool: VirtualBox VM, WireShark
- Github link

SHIKHON - The Admission Helper

Software Development Project *2021*

- The targeted users of the platform is University Admission Candidates and the purpose of the application is to provide tutorials, notes, and solutions about a particular topic of a particular subject. The main challenge of this project is to learn how to build an interactive live application.
- Language : Javascript, Library : NodeJS, Database : MongoDB, Frontend : React Native JS
- Github link

Lines Of Action (LOA)

Artificial Intelligence Project *2021*

- This project provides a platform where the player can play with an AI agent or two players can play with each other.
- Language: Java, Framework: Slick
- Github link

Skills

Programming	Python, R, C/C++, Java, javascript, BashScript, HTML, CSS
Database	PostgreSQL, MongoDB
Frameworks	Keras, PyTorch, Node.js, React.js, React-native, Bootstrap
Tools/Software	Git, Microsoft Word, PowerPoint, Excel, Figma, MATLAB, Latex, Adobe XD (UI/UX Design)
Libraries	Pandas, NumPy, Matplotlib, SciPy, Scikit-Learn, TensorFlow, OpenFace

English Proficiency

TOEFL Reading: 26, Listening: 26, Speaking: 22, Writing: 27

Achievements

2022	**FE Certificate**, Fundamental IT Engineer (FE) level-2 Examination (passed both shifts)	*Bangladesh*
2009-2021	**Merit Scholarship**, Primary School, Junior School, Secondary School, and Higher Secondary Certificate	*Dhaka Board*

References

Aidong Zhang	Professor, Computer Science, UVA, email: aidong@virginia.edu
Dr. Mohammad Saifur Rahman	Associate Professor, CSE, BUET, email: mrahman@cse.buet.ac.bd