

Md Muhaiminul Islam Nafi

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OBJECTIVE

I am Md. Muhaiminul Islam Nafi. I have completed my BSc. degree in Computer Science from BUET. I want to build a successful career using my technological knowledge and relevant skills. I want to contribute to the betterment of the place I am allowed to work for. I also want to hone my other skills like time management, fast adaptability, and creativity.

EDUCATION

MOTIJHEEL GOVT. BOYS' HIGH SCHOOL SSC — GPA: 5.00/5.00	2015-2017
NOTRE DAME COLLEGE DHAKA HSC — GPA: 5.00/5.00	2017-2019
BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY B.Sc. IN COMPUTER SCIENCE AND ENGINEERING — CGPA: 3.97/4.00	2020-present

SKILLS

PROGRAMMING LANGUAGES	Python Javascript Typescript C c++ Assembly (x86, MIPS) Bash Java LaTeX
WEB DEVELOPMENT	HTML CSS Express React Svelte Django Next.js Figma Docker Spring Boot LangChain
MACHINE LEARNING	Matplotlib NumPy Pandas Scikit-learn PyTorch
TOOLS AND TECHNOLOGIES	Design Patterns Git Microservices architecture Swagger API Postman MISP Markdown MS Azure Cloud VM
DATABASES	MySQL PostgreSQL Oracle Prisma ORM
CONTENT MANAGEMENT	WordPress
GAME DEVELOPMENT	Pygame Unity
OTHERS	Bison Flex Selenium BeautifulSoup JavaFX ATmega32

RESEARCH EXPERIENCE

Predicting C- and S-linked Glycosylation sites from protein sequences using protein language models *(Published)*

In this study, we created a hybrid deep-learning architecture to predict C- and S-linked glycosylation sites from protein sequences using protein language model embeddings and contextual information. [Link to article](#)

Predicting RNA 5-Hydroxymethylcytosine Modification with Deep Learning Models Using RNA Language Model Embeddings *(Under revision)*

We designed a dual-branch deep learning model architecture to predict RNA 5-Hydroxymethylcytosine modifications from RNA language models and extracted biological interpretations.

DeepBCTPred: Deep Learning-Based Prediction of Bladder Cancer Tissues from Endoscopic Images *(Under revision)*

In this study, we designed a pipeline to generate new images and a novel genetic algorithm to select images from them effectively. Additionally, we combined handcrafted features with learned features from convolutional neural networks.

StackGlyEmbed: Prediction of N-linked Glycosylation sites using protein language models *(Under revision)*

We proposed a model, StackGlyEmbed, to predict N-linked glycosylation sites from protein sequences utilizing protein language models leveraging window and per-residue features. [Link to the initial version of the manuscript: bioRxiv](#)

Prediction of protein-carbohydrate binding sites from protein primary sequence *(Under rebuttal)*

In this study, we propose StackCBEEmbed, an ensemble machine learning model to effectively classify protein-carbohydrate binding interactions at the residue level. StackCBEEmbed combines traditional sequence-based features along with features derived from a pre-trained transformer-based protein language model. [Link to the initial version of the manuscript: bioRxiv](#)

Predicting Protein-Carbohydrate Binding Sites: A Deep Learning Approach Integrating Protein Language Model Embeddings and Structural Features *(Manuscript in preparation)*

In this study, we created a novel deep-learning architecture that combines protein language model embeddings and structural features to predict protein-carbohydrate binding sites.

ResLysEmbed: A ResNet-Based Framework for Succinylated Lysine Residue Prediction Using Sequence and Language Model Embeddings *(Manuscript in preparation)*

In this study, we developed a hybrid deep-learning architecture incorporating protein language models to identify succinylated lysine residues.

AWARDS AND HONORS

BUET RISE GRANT (GRANT RECEIVE)	<i>RISE Student Research Grant [No. S2024-01-004]</i>
HONORABLE MENTIONS	<i>MicroProcessor and MicroController project</i>
DEAN'S LIST AND UNIVERSITY MERIT LIST	<i>Recipient of both Scholarships for academic excellence.</i>

PROJECTS

ONCAMPUS

GITHUB LINK: [BACKEND FRONTEND](#)

Frontend: Framework: Next.js, Styling: Tailwind CSS, Component Library: Material Tailwind, Text Box: jodit-react, PDF Viewer: react-pdf, 360° Virtual Tour: react-photo-sphere-viewer, Language: TypeScript.

Backend: Framework: Node.js, Express, Architecture: Microservice Architecture, ORM: Prisma ORM, Security: Helmet, JWT, Authentication: Keycloak, NextAuth.js. Database: PostgreSQL hosted on Supabase, File Storage: Edgestore, Google Calendar Integration: Google Cloud API.

Deployment: MS Azure Virtual Machines, Supabase, Docker (for Keycloak), SSL Certificate from Namecheap, API Documentation with Postman.

MOOMARKET

GITHUB LINK: [BACKEND & FRONTEND](#)

Tech Stack: JavaScript (Node.js, Vanilla JS), Express, HTML, EJS, PostgreSQL, Git, GitHub, npm, Render.

ANIMATRIX

GITHUB LINK: [BACKEND & FRONTEND](#)

Tech Stack: JavaScript (Node.js, Vanilla JS), Express, HTML, EJS, Oracle DB, Git, GitHub, npm.

MISP AUTOMATION

GITHUB LINK: [CODES](#), YouTube LINK: [VIDEO](#)

Python (Programming Language), JavaScript, MISP

PACMAN

GITHUB LINK: [GAME](#)

C (Programming Language), C++, Object-Oriented Programming (OOP), igrphics

UNBEATABLE PROTECTION: THE 5-WAY SECURITY VAULT

GITHUB LINK: [CODES](#), YouTube LINK: [VIDEO](#)

Python (Programming Language), Arduino, EEE

MOTIF SEARCH

GITHUB LINK: [CODES](#)

Python (Programming Language)

CERTIFICATES

PERFECT ATTENDANCE CERTIFICATE

NOTRE DAME COLLEGE DHAKA

Issued May 2020

CERTIFICATE IN NATIONAL SKILL STANDARD BASIC COURSE EXAMINATION, 2015

BANGLADESH TECHNICAL EDUCATION BOARD

Issued Sep 2015

REFERENCES

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