Md Muhaiminul Islam Nafi

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📍 Gopibag, Dhaka-1203   in LinkedIn   GitHub
🌐 Portfolio1   🌐 Portfolio2   🎓 Google Scholar

EDUCATION

Bangladesh University of Engineering and Technology
B.Sc. in Computer Science and Engineering   2020-2025
CGPA: 3.97/4.00
Notre Dame College
HSC   2017-2019
GPA: 5.00/5.00
Motijheel Govt. Boys' High School
SSC   2015-2017
GPA: 5.00/5.00

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, Beautiful Soup, JavaFX, ATmega32

PROJECTS

OnCampus - BUET Student Hub
Github: Backend, Frontend
(CSE408 - Software Project)
OnCampus is a platform for BUET students to manage academic and extracurricular activities easily. It allows users to post academic updates, conduct polls, and access notices, along with information on club events, competitions, and seminars, all in one place.
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 - Online Marketplace Platform
Github: Backend & Frontend
(CSE326 - ISD Project)
MooMarket is an online marketplace where sellers can advertise products like cattle and meat, with location-based display options. Buyers can filter and purchase products, place order posts, and rate sellers, while sellers can accept orders and participate in auctions. The platform also assigns priority points to sellers based on reviews and ratings. We created BPMN diagrams, mock UI, class diagrams, ERD diagrams, as well as sequence, collaboration, and state diagrams
Tech Stack: JavaScript (Node.js, Vanilla JS), Express, HTML, EJS, PostgreSQL, Git, GitHub, npm, Render.

AniMatrix - Content Platform
Github: Backend & Frontend
(CSE216 - Database Project)
AniMatrix is a web-based platform serving as a wiki for different content. It enables users to interact with content through voting, watchlists, reading lists, and community features like forums and chat.
Tech Stack: JavaScript (Node.js, Vanilla JS), Express, HTML, EJS, Oracle DB, Git, GitHub, npm.

MISP Exploration and Application
Github: Codes, **YouTube:** Video
(CSE406 - Security Project)
We explored MISP's features and integrated it with Hive. Additionally, we utilized its REST API through the PyMISP automation library and developed a browser extension to check vulnerabilities via MISP.
Tech Stack: Python, JavaScript, MISP.

Pacman Game
Github: Game
(CSE102 - Igraphics Project)
Used the OpenGL-based iGraphics library to develop a Pacman game. The game includes the classic mechanics with some additional features.
Tech Stack: C, C++, iGraphics.

Unbeatable Protection: The 5-way Security Vault
Github: Codes, **YouTube:** Video
(CSE316 - MicroProcessor and MicroController Project)
We have created a 5-way locker security project in a real-world implementable way. 5-way verifications were: password verification, RFID verification, face verification, voice verification, and fingerprint verification.
Tech Stack: Python, Arduino, Electronics.

Motif Search
Github: Codes
(CSE463 - Bioinformatics Project)
Implemented Randomized and Gibbs Sampler Motif Search along with their modifications. Also explored web tools like MEME and MEMEChIP for motif discovery.
Tech Stack: Python.

Football Club Manager - Desktop App
Github: Codes
(CSE108 - JavaFX Project)
Developed a JavaFX-based football club manager app with multithreaded socket programming for client-server communication.
Tech Stack: Java, JavaFX, Multithreading, Socket Programming.

RESEARCH EXPERIENCE

DeepBCTPred: Deep Learning-Based Prediction of Bladder Cancer Tissues from Endoscopic Images
Under Revision (CSE472 - Machine Learning Project)
Developed a pipeline to generate new images and a novel genetic algorithm to select images from them effectively and combined handcrafted features with learned features from convolutional neural networks.
Predicting Protein-Carbohydrate Binding Sites: A Deep Learning Approach Integrating Protein Language Model Embeddings and Structural Features
Manuscript in Preparation (Undergraduate Thesis)
Designed a novel deep-learning architecture that integrates protein language model embeddings with structural features for predicting protein-carbohydrate binding sites.

AWARDS AND HONORS

- **BUET RISE Grant (Grant received)**
  RISE Student Research Grant [No. S2024-01-004]

- **Honorable Mentions**
  MicroProcessor and MicroController project

- **Dean's List and University Merit List**
  Recipient of both Scholarships for academic excellence

CERTIFICATES

- **Perfect Attendance Certificate**
  Notre Dame College, Dhaka

- **Certificate in National Skill Standard Basic Course Examination, 2015**
  Bangladesh Technical Education Board