

Nuraiyad Nafiz Islam

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PROFESSIONAL EXPERIENCE

Spectrum Software and Consulting Ltd.

Feb 2023 - Present

Machine Learning Engineer

June 2023 - Present

- Working on a production-grade license plate detection and recognition system which will be deployed at toll plazas in Bangladesh. The developed system uses transformer based architecture instead of traditional convolutional OCR systems.
- Development of Java based GUI for object detection task for controlling robot.
- Developing and implementing algorithm for vehicle routing problem.

Machine Learning Intern

Feb 2023 - May 2023

- Worked in R&D with ML team

EDUCATION

Bangladesh University of Engineering and Technology(BUET)

July 2023 - Present

M.Sc. in Computer Science and Engineering(Pursuing)

Bangladesh University of Engineering and Technology(BUET)

Mar 2018 - May 2023

B.Sc. in Computer Science and Engineering

New Govt. Degree College, Rajshahi

July 2015 - July 2017

H.S.C. - Science

Govt. Laboratory High School, Rajshahi

Jan 2007 - June 2015

S.S.C. - Science

SKILLES SUMMARY

Languages: C, C++, Java, Python, JavaScript, Bash, 8086 Assembly

Frameworks and Libraries: Django, JavaFX, Numpy, Pandas, Matplotlib, OpenCV, Seaborn

Tools and IDE: PyCharm, CLion, IntelliJ IDEA, WebStorm, Netbeans, Visual Studio, Atmel Studio, VS Code, Atom, Jupyter Notebook, Google Colab, Docker

Databases: SQL, Oracle, SQLite

Operating Systems: Windows, Linux

Hardware: Arduino, ATmega32

Others: HTML, CSS, Bootstrap, Latex, Git, Github, Figma


COURSEWORK [SELECTED]

- Structure Programming and OOP (C,C++, Java) • DS Algorithms • Operating Systems • Networking Security • Database Management System(DBMS) • Artificial Intelligence • Fault Tolerance System • Graph Algorithm • Machine Learning


PROJECTS

[River Learning](#)  — C, C++, iGraphics **2018**

A single player learning game for kids. The game has four type of puzzles. As the game progresses, the response time for the gamer reduces. The main objective of this project was to utilize basic programming knowledge.

[Bus Ticket Booking Desktop Applicaton](#)  — Java, JavaFX **2019**


A Desktop GUI based bus ticket booking application. The aim of this project was to get familiar with Java, OOP, Socket Programming(Networking), Multi-threading and GUI based framework JavaFX.

[Restaurant Management System](#)  — Django, JavaScript, HTML, CSS, Bootstrap, Oracle **2020**

This was a website to handle costs, employees and online/offline orders of a single specific restaurant. This project was done under the Database course and the objective was to utilize SQL and oracle database.

[Location Based Dynamic Advertisement System](#)  — ATmega32, Arduino, GPS Module **2021**

This was a hardware project implemented in our Micro-controller sessional course using ATmega32, Arduino, 16x2 LCD display, GPS module, Android device. The project was based on this [Paper](#).

[Flexible Random Early Detection](#)  — Python, C++, NS3 **2022**

RED(Random Early Detection) is a classic algorithm to ease congestion and then to improve the quality of service of the network. To improve the performance of linear approach of RED, a nonlinear approach is proposed in the [Paper](#). The idea of this paper was implemented in Network Simulator 3.

[DoctorZone](#)  — Django, JavaScript, HTML, CSS, Bootstrap, SQLite **2022**

Dockzone is a online platform for Appointment Management between doctor and patient and Medicine delivery system.

[FingerCount](#)  — Python, OpenCV, Mediapipe **2021**

Python based computer vision desktop application to detect the number of fingers. Mediapipe, a cross-platform pipeline framework to build custom machine learning solutions for live and streaming media, was used for the detection part. And then the hand gesture is detected.

[Road Sign Detection](#)  — Python, OpenCV, YOLOv8 **2023**

This project uses YOLOv8 for road sign detection, trained on a dataset of road sign images. The model is built using PyTorch and is capable of detecting and classifying various types of road signs, with evaluations done using precision, recall, and F1 score metrics.

EXTRACURRICULAR

Badhan, Buet Zone **2018 - Present**

Vice President **2022**

President(RH Unit) **2022**

Treasurer **2021**

Badhan is a campus based voluntary blood donors' organization. In last four years, as a team, Badhan BUET Zone created more than 1200 new blood donors and managed more than 6000 units of blood for the patients in different hospitals. Initiating social movement to build up a healthy society through motivating voluntary blood donation, donating blood voluntarily and others services and awareness programs.

CERTIFICATION

- **Machine Learning Foundations: A Case Study Approach** (Coursera)
- **Neural Networks and Deep Learning** (Coursera)
- **LinkedIn assessment** : C++, Python, OOP(Object Oriented Programming)

AWARDS AND ACHIEVEMENTS

- Two times national and five times regional winner of Bangladesh Physics Olympiad(BdPho)
- Four times regional winner of Bangladesh Mathematical Olympiad(BMO)
- Board Scholarship by Govt. Bangladesh for outstanding performance in PSC, JSC, SSC, HSC

REFERENCES

- **Prof. Dr. Md. Monirul Islam**
Professor, Department of Computer Science and Engineering
Bangladesh University of Engineering & Technology, Dhaka-1000 , Bangladesh
Email: mdmonirulislam@cse.buet.ac.bd
- **Prof. Dr. ABM Alim Al Islam**
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