

S M RIAD HOSSAIN

+8801789376545 riadhossain658@gmail.com [in](#) [G](#)

🏠 Address: House: KA-3/1A, Jagganathpur, Basundhara, Vatara Dhaka-1229, Bangladesh

Professional Experience

Software Engineer I

December 2023 – To Date

DataPath Ltd

Dhaka, Bangladesh (On-Site)

- Back-End Developer: Skilled in crafting scalable web applications with Microsoft SQL Server, C#, ASP.NET, and JavaScript, focusing primarily on service Back-End development.
- Full-Stack Capabilities: Versatile expertise covering both Back-End and Front-End development, contributing to the entire web application stack as needed.

Junior Software Engineer

May 2022 – June 2023

Metroscientific

California, USA (Remote)

- developed a computational storage drive (CSD) interface operating system Object Storage Layer that improves data read write speed by 10 times.
- Worked with Linux Kernel 4.19.18 and designed storage drive using AWS ec2 server and c&c++
- Used RocksDB key-value pair database to store and retrieve data from nvme ssd.

Software Engineer Intern

December 2020 – June 2021

Metroscientific

California, USA (Remote)

- Developed Object Oriented Programming(OOP) based operating system for automation tools using c++ in MFC framework.
- Worked with AWS server to manage user-inputted data across multiple platforms and direct that into petalinux operating system located inside FPGA SoC.

Research Experience

Research Assistant

June 2023 – November 2023

RUET

Rajshahi, Bangladesh

- Implemented Artificial Neural Network from scratch in Verilog for heterogeneous computing resources like FPGAs
- Implemented First-ever FPGA classifier for Bengali HCR that is **27 times faster** than CPU-based implementations.
- Used Verilog HDL and Xilinx Vivado design suit for hardware acceleration.

Publication

- S. M. R. Hossain, K. Zinnurine, N. U. Sadad and M. N. I. Mondal, "FPGA based ANN classifier for Bengali Handwritten Digit Recognition," 2023 26th International Conference on Computer and Information Technology (ICCIT), Cox's Bazar, Bangladesh, 2023, pp. 1-6, doi: 10.1109/ICCIT60459.2023.10440974. keywords: Handwriting recognition;Power demand;Software;Numerical models;Character recognition;Hardware design languages;Field programmable gate arrays;Field Programmable Gate Array;Hardware Accelerator;Artificial Neural Network (ANN);HDL Recognition;Bengali Digit;Sigmoid;and ReLU.

Education

Rajshahi University of Engineering & Technology

January 2018 – April 2022

Bachelor of Science in Computer Science and Engineering

Rajshahi, Bangladesh

Relevant Coursework:

- | | | | |
|------------------------|-----------------------|---------------------------|-------------------------|
| * Data Structures | * Algorithms Analysis | * Artificial Intelligence | * Systems Programming |
| * Software Methodology | * Database Management | * Internet Technology | * Computer Architecture |

Notre Dame College

June 2015 – May 2017

Higher Secondary School(HSC)

Dhaka, Bangladesh

Projects

Computational Storage Drive | *Linux Kernel, C/C++, AWS ec2 server, RocksDB database* | [Github Link](#) **June 2022**

- * A new concept for storing drives as SSD with computational power that will increase the server data read write 10 times faster than before.
- * Users can remotely access data through HTTP and store data that will bypass linux filesystem and will be stored directly to SSD through customized Object Storage Layer.

FPGA Based BHDR | *Verilog HDL, Xilinx Vivado, Python* | [Github Link](#) **June 2022**

- * FPGA-based hardware accelerator design of ANN implemented in Verilog for Bengali Handwritten Digit Recognition applications.
- * The maximum detection accuracy of 94.00% in hardware implementation with 27 times faster than CPU based solutions and having 2.5 times power optimized.

CityInfo Web Application | *ASP.NET, Angular, C#, JavaScript, HTML5, CSS3* | [Github Link](#) **December 2023**

- * A full-stack web application for enthusiastic travelers using Microsoft SQL Server as the database in the back end, with ASP.NET as the web API and Angular framework on the front end
- * Users can store their memories and descriptions of the city and other users can gather specific information about new places they want to explore next.

Technical Skills

Programming Languages: C, C++, Python, Verilog, C#, SQL, JavaScript, HTML/CSS

Developer Tools: Visual Studio, AWS ec2 Cloud Platform, Xilinx Vivado

Technologies/Frameworks: Linux, Windows, Mac OS, GitHub, ASP.NET, Angular, MVC

Leadership / Extracurricular

Greater Jashore Student's Association

June 2021 – May 2022

President

RUET, Rajshahi

- * Achieved remarkable position on the board of directors of one of the only 15 student associations in the university.
- * Led group of 300+ members and Managed executive board of 15 members to work towards goals that improve and promote community service, academics, and unity.

Sunrise FC, Jashore

August 2019 – Present

Football Team Captain

Jashore, Bangladesh

- * Finalist of the Mujib-100 Football Tournament-2020

- * Leading the team in the Jashore local football league as well as the seasonal tournaments.

Awards / Achievements

Undergraduate Government Scholarship

January 2018 – June 2022

Rajshahi University of Engineering & Technology, Bangladesh

RUET, Rajshahi

Secondary School Certificate (SSC) Scholarship- 2015

June 2015

Board Scholarship for excellent performance in SSC board examination.

Jashore Education Board, Jashore

Gayn-Jam Intra-University Programming Contest

August 2019

5th position among 200 teams

RUET, Rajshahi

References

Dr. Md. Nazrul Islam Mondal

Professor, Department of Computer Science & Engineering

Rajshahi University of Engineering & Technology

☎ +880-1720662278

✉ mondal@cse.ruet.ac.bd

Nahin Ul Sadad

Assistant Professor, Department of Computer Science & Engineering

Rajshahi University of Engineering & Technology

☎ +880-1778059702

✉ nahin@cse.ruet.ac.bd