

## MD. AL SIAM

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### EDUCATION

**B.Sc in Computer Science & Engineering**

2017-2022

**Rajshahi University of Engineering & Technology (RUET)**, Rajshahi, Bangladesh

CGPA: 3.27 on a scale of 4.00

### WORK EXPERIENCE

**Software Engineer at Enosis Solutions**

October 2022 – March 2023

- Developed full-stack web applications with **ASP.NET**, **AngularJS**, **Javascript** and **MSSQL**
- Performed in-depth analysis, research and development of client's requirements
- Performed analysis to find out the root causes of bugs on existing projects and made stable fixes to them

**AI Research Assistant (Part-time) at MyMedicalHub**

October 2020 – March 2022

- Researched **musculoskeletal patterns** and **range of motion** using **Signal Processing Methods**, **Computer Vision**, and **Deep Learning** based state-of-the-art pose estimation models
- Developed projects with **Python** and **Django REST Framework** maintaining clean, modularized code and proper software engineering standards and deployed them using **Amazon Elastic Compute Cloud (EC2)** and **Amazon Simple Storage Service (S3)**
- Developed a **novel angle drawing method** with a geometric solution using **OpenCV** that could resolve the problems of the previously used library-based method and improve performance by more than **50%**
- Proposed **two types of novel ML-based gait abnormality detection frameworks** and initiated a new project 'Intelligent Gait and Balance System'
- Prepared datasets for physical exercise specific custom trained models
- Prepared test cases for APIs of different projects, tested with **Postman** and provided impactful feedback
- Prepared patents for research outcomes and findings

### PUBLICATIONS

- Deep Learning Based Air-Writing Recognition with the Choice of Proper Interpolation Technique. Sensors, 21(24), p.8407. (Q2, Impact Factor: 3.847) [📄](#)
- Gait Recognition with Wearable Sensors using Modified Residual Block-based Lightweight CNN. IEEE Access. (Q1, Impact Factor: 3.476) [📄](#)

### SKILLS

**Programming Languages:** C/C++, Python, C#, Javascript, Typescript

**Frameworks:** Django REST Framework, Tensorflow, Keras, ASP.NET MVC, ASP.NET Web API

**Database:** MySQL, MSSQL

**Software Engineering Tools:** Git, GitHub, Sourcetree, Azure, Postman, Jira

**Familiar:** Java, HTML, CSS, Linux, Latex

**Others:** Data Structures, Algorithms, Machine Learning, Deep Learning, Computer Vision

### PROGRAMMING CONTEST EXPERIENCE

- 8<sup>th</sup> at VU CSE Tech Fest 2019 out of 43 teams [📄](#)
- 52<sup>nd</sup> at Technocracy 2019, RUET out of 96 teams [📄](#)
- 18<sup>th</sup> at RUET GyanJam 2018 out of 48 teams [📄](#)

### PROGRAMMING PROBLEM SOLVING EXPERIENCE

- 400+ problems solved in **LeetCode** (Profile: [\\_siummy](#))
- 950+ problems solved in **CodeForces** (Profile: [\\_siummy](#))
- Participated in 150+ rated contests in **CodeForces** (Maximum Rating: **Specialist, 1443**)

### ACADEMIC PROJECTS

**Realistic Activity Recognition using Sensors with Deep Convolutional Neural Network**

A human activity recognition (HAR) model which can efficiently use signals from IoT sensors like accelerometers, and gyroscopes with proper windowing and data segmentation techniques.

Tools: **Python**, **Keras**, **Deep Learning**

## Question Answer Website

A question-answer community website with the features of posting questions and answering them on the thread by different user and option to upvote and downvote on questions

Tools: **HTML, CSS, PHP**

## INDEPENDENT COURSEWORKS

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- Neural Networks and Deep Learning, Coursera [!\[\]\(cf5be311f7b2821912d8009884508fa2\_img.jpg\)](#)
- Structuring Machine Learning Projects, Coursera [!\[\]\(9804e70d96ff9fe9899b264c06a33cd7\_img.jpg\)](#)
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Coursera [!\[\]\(4f49380f3d6bce047bc47b2072cc076f\_img.jpg\)](#)
- Convolutional Neural Networks, Coursera [!\[\]\(73944fd4f6fb83e4c64013731d1820cc\_img.jpg\)](#)

## VOLUNTEERING EXPERIENCE

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**Member**

**March 2017 - October 2022**

**RUET Analytical Programming Lab**

- Mentored competitive programming, logical thinking and programming problem solving techniques

**Assistant Finance Secretary**

**April 2018 - May 2019**

**RUET Greater Mymensingh Association, RUET**

- Worked for fund collection, cost management and event organisation

**Organizing Volunteer**

**2022**

**RUET CSE Fest 2K22 Inter University Programming Contest**

- Worked on programming contest management and assurance of proper coding environments on devices

## LANGUAGES

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- **English:** Full Professional Proficiency
- **Bengali:** Native or Bilingual Proficiency