# Rakibul **Islam**

Software Engineer



#### **Personal**

Rakibul Islam Gender: Male Marital Status: Unmarried Date of Birth: 21 October 2000 Address: Joydepur, Gazipur-1700 Nationality: Bangladeshi

#### Areas of specialization

Python • LLM • Machine Learning · Deep Learning Data Analytics

## Soft skills

Fast Learning **English Communication** Presentation Analytical Thinking Problem Solving Leadership Management Teamwork Curiosity to Learn Helpful Prompt Engineering Utilization of Technology

#### Interests

Deep Learning Artificial Intelligence Data Science Research Technology & Innovation

#### Contact



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## ABOUT ME

I am passionate about CSE, particularly in the areas of Intelligent Systems, Automation, Data Science, and Artificial Intelligence. With the ongoing AI revolution, I believe systems should not only be functional but also intelligent. I thrive on exploring new concepts and technologies within these domains and am highly motivated to continuously learn and grow. I believe that the ability to learn quickly is the most crucial skill for the future. In today's world, anyone with dedication can learn anything. My curiosity drives me to understand how intelligent systems work, extract meaningful insights from big data, and develop systems capable of acting like humans—or even beyond human capabilities. I am particularly fascinated by the opportunity to create intelligent software that has practical, real-world applications.

As a recent graduate, may not yet have extensive professional experience, but I have actively engaged in academic and personal projects, research, and industry exposure. These experiences have provided me with a strong foundation, as well as hands-on experience applying these concepts to solve real-world problems. I am constantly eager to learn, turn my ideas into reality, and make an impact in the industry. My drive to implement innovative solutions and develop intelligent systems is matched by my commitment to continuous learning and professional growth. I am excited to contribute to the advancement of Intelligent Systems while making meaningful contributions to industry applications.

## EXPERIENCE

Oct 2024

#### Jr. Software Programmer



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Promoted to Jr. Software Programmer within just 2 months following a successful internship at GTR. Worked on the Alfred HRM software project, implementing features using ASP.NET MVC and integrating cutting-edge technologies such as CrewAi and Retrieval-Augmented Generation (RAG) with LLMs to enhance automation capabilities.

Aug 2024-Oct 2024

#### Python Intern

GENUINE TECHNOLOGY & RESEARCH LIMITED (GTR) . Dhaka 9



As a Python Intern at GTR, I was responsible for enhancing system intelligence by contributing to projects, including the implementation of Alfred and HRM software using ASP.NET MVC. I integrated advanced tools such as CrewAi and leveraged Retrieval-Augmented Generation (RAG) with LLMs to improve system capabilities. My responsibilities included automating workflows, developing highperformance web APIs, and designing and managing optimized databases. I have gained experience with various technologies, including ASP.NET, design patterns, Docker, and Apache Airflow. I am skilled in developing applications using Flask, CrewAI, RAG, and LLM frameworks (Hugging Face, Lama-Index, Ollama). My expertise includes using Selenium for automation, FastAPI for building APIs, and SQLAlchemy for database management. Additionally, I have hands-on experience with object detection, C, ASP.NET Core 8 (MVC, Web API), PostgreSQL (database ERM, schema design, normalization), and front-end technologies like HTML, CSS, JavaScript, and Bootstrap for responsive web design.

#### 2022-2024 Past

#### Co-Founder and CTO

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## NIHARON

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2022-2024

#### **General Member**

UIU APP FORUM, UIU ENTREPRENEUR DEVELOPMENT FORUM  $\cdot$  UIU  $\ref{V}$ 

## RELEVANT SKILLS

- · Multi Agent System (Crew AI)
- LLM (LlamaIndex, LangChain, Hugging Face)
- · RAG (Retrieval-Augmented Generation)
- · Web Scraping (Selenium, BS4, Scrapy)
- · Machine Learning and Deep Learning
- · API (FastAPI, REST API)
- Database Design, ERD, Optimization (SQL, PostgreSQL, Oracle)
- ORM Technology (SQLAlchemy, Microsoft Entity Framework)
- · Html, CSS, JS and Bootstrap
- · Django
- ASP.NET Core 8 MVC (Repository, Unit of Work Pattern)
- Deep Learning Frameworks
- · Computer Vision Libraries
- Data Cleaning and Preparing
- · Data Visualization
- · Exploratory Data Analysis (EDA)
- Statistical Analysis
- · Data Mining
- Image Processing
- Object Detection, Classification and Segmentation
- · Application of RNN, NLP
- · Data Structure and Algorithms
- · Design Pattern
- · Documentation
- · Docker

## **PROGRAMMING**

Python	
SQL	
C++	
Java	
Numpy	
Pandas	
Matplotlib	
OpenCV	
Tensorflow	
sklearn	

## **OTHERS**

- Good Knowledge in Computer Vision, Natural Language Processing (NLP), Convolutional Neural Networks (CNN), Graph Neural Networks (GNN), Generative Adversarial Networks (GAN), Sequence Modeling
- Familiar with Seborn, Pytorch, Data Dashboarding, Autoencoders (AE),
   Vision transformer (ViT), AutoML, Flutter, JavaFX, etc
- · Experienced in Powerpoint, Excel, Docs

## **EDUCATION**

2020–2024 B.Sc.in Computer Science and Engineering

United International University · Dhaka 💡

CGPA: 3.57

2019 | Higher Secondary Certificate (HSC)

Gazipur Metropolitan College · Gazipur 💡

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2017 | Secondary School Certificate (SSC)

RANI BILASHMONI GOVERNMENT BOYS' HIGH SCHOOL · Gazipur 💡

arade: A+



## **CERTIFICATES**

Machine Learning Specialization
IBM Data Science Professional Certificate
IBM AI Engineering Professional Certificate
Deep Learning Specialization
Statistics - Google
British Council - IELTS English
Presenting Author - ICEEICT 2024

## **PUBLICATIONS**

2024 Deep Multi-Modal Approach for Protein Function Prediction and Classification, IEEE

2024 From Pixels to Diagnosis: Convolutional Neural Networks in Tuberculosis Screening , IEEE

2024 Risk Minimization by Early Readmission Prediction for Diabetes Patients: A Data-Driven Machine Learning Approach , IEEE

2024 Ensemble Deep Learning for Real-Time Textile Fabric Defect Detection and Classification Using YOLOv8 and CNNs, ACM

2024 Co-relation-based Feature Extraction to Improve Classification Accuracy, IEEE

2024 Smart Grid Stability Prediction for Efficient Power Management Using Machine Learning, IEEE

## **RELEVANT PROJECTS**

- Fabric Defect Detection & Classification (Computer vision, CNN, Ensemble Methods)
- 2. Weapons Object detection (Computer vision, Transfer Learning, CNN)
- 3. Tuberculosis Screening (Computer vision, CNN)
- 4. Diabetic Retinopathy Detection (Computer vision, CNN)
- 5. Face Recognition using OpenCV (Computer vision, CNN)
- 6. Neural Network, CNN from Scratch (Pyhton, Numpy)
- 7. Protein Function Prediction & Classification (DNN, Pyhton, Visualization)
- 8. Text Sentiment Analysis (NLP)
- 9. Customer Purchase Analysis (Pre-processing, EDA, Visualization, ML, Evaluation)
- 10. Analyzing Stock Performance (Web scraping, EDA, Visualization, Dashboarding)
- 11. House Pricing Analysis (Visualization, Model Development, Evaluation)
- 12. Bengali Text with Regional Dialects to IPA (NLP)
- 13. House Rental Website (DBMS, SQL)
- 14. Automatic Code Evaluation System (Python, Django)
- Job Application Automation Software (.NET MVC 8, FastAPI, Ollama, CrewAI)
- 16. HRM Software (.NET MVC 8, JS, Boostrap, Tabulator)
- 17. Domain Specific Al Assistant (RAG, Langchain, Llamalndex) ) etc.

## REFERENCES

#### Dr. Mohammad Nurul Huda

Professor & Head of Department Department of CSE United International University Email: mnh@cse.uiu.ac.bd (FYDP Advisor)

### Dr. Riasat Azim

Assistant Professor Department of CSE United International University Email: riasat@cse.uiu.ac.bd (Research Advisor)