Nahian Rifaat

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EXPERIENCE

Nascenia Ltd., Dhaka, Bangladesh	Dec 2022 – Apr 2025
Software Engineer	Jan 2025 – Apr 2025

- Led the development of an NBR-enlisted VAT Management Software with Ruby on Rails, MySQL, jQuery, Docker, and Nginx.

Technical Team Facilitator	Jan 2024 - Present

- Managed and trained new engineers for effective resource allocation as a Technical Team Facilitator and developed various features for an NBR-enlisted VAT Management Software.

Junior Software Engineer	Dec 2022 - Dec 2024

- Developed a Bengali AI chatbot with RASA and LLMs; implemented a survey project using machine learning.

MyMedicalHUB Bangladesh Ltd., Dhaka, Bangladesh	Oct 2020 - Oct 2022
AI Research Assistant	

- Conducted research to determine potential risk factors of musculoskeletal pain for gait analysis, golf swing analysis, and integrative biomechanical analysis projects using computer vision and deployed machine learning solutions using Django, AWS S3, Apache HTTP Server; performed API validation using Postman.
- Reduced video processing efficiency by 30% and documented research findings for patenting.

Machine Learning Research Group, RUET	Feb 2021 - Oct 2022
Undergraduate Researcher	

Rajshahi University of Engineering & Technology, Kazla, Rajshahi-6204, Bangladesh

- Conducted research on gait recognition using machine learning with IMU sensor data from smartphones and lung cancer biomarker detection and prediction, resulting in published research articles.

EDUCATION

● **M.Sc in Computer Science**	May 2025-Apr 2027

- Ontario Tech University

● **B.Sc. Engg. in Computer Science & Engineering**	Jan 2017-Oct 2022

- Rajshahi University of Engineering & Technology, Kazla, Rajshahi-6204, Bangladesh
- **CGPA:** 3.38/4.00 (84.5%) with an Award of Excellence by the Department of Computer Science and Engineering

PUBLICATIONS

- **Rifaat, N**., Ghosh, U. K., & Sayeed, A (2022). **Accurate gait recognition with inertial sensors using a new FCN-BiLSTM Architecture**. *Computers and Electrical Engineering,* Volume 104, 108428. **[CiteScore: 9.2]**
- Ghosh, U. K., Al Abir, F., **Rifaat, N**., Shovan, S. M., Sayeed, A., & Hasan, M. A. M. (2021). **Most dominant metabolomic biomarkers identification for lung cancer**. *Informatics in Medicine Unlocked*, 100824. **[CiteScore: 9.5]**

STANDARDIZED TEST SCORES

- International English Language Testing System (IELTS)   14 April, 2022

Overall	Listening	Reading	Writing	Speaking
8.0	9.0	7.5	7.0	7.5

PROJECTS

- **MediNotes – Electronic Medical Record Application**   Jan 2023

  - Developed a web application to track medical records with HTML5, CSS3, SQLite, and Ruby on Rails.
  - Implemented authentication, authorization, medicine tracking, and an admin panel.
  - Deployed the application using Nginx, AWS, and Capistrano.

- **LandHSI**   Apr 2022 - Present

  - Developed a new neural network architecture to accurately classify land mass for satellite images on multiple datasets using TensorFlow and OpenCV with a high score on the evaluation metrics to enhance remote sensing for satellite imaging.

- **DisMo - Cost-Efficient Air Mouse for the Handicapped**   Jul 2019 - Oct 2022

  - Designed and developed a Human-Computer Interfaced wireless wearable head mouse for handicapped individuals.
  - Integrated Arduino boards, IMU sensors, and a voice recognition module for central control, mouse movement, and voice-controlled click operations.
  - Developed a wireless dongle with Bluetooth modules for wireless mouse control.

- **SightSeer - Web Application for Tourist Accommodation Reviews**   Dec 2018 - Apr 2019

  - Developed the web application using HTML5, CSS3, Bootstrap, Node.js, Express.js, MongoDB, and Mongoose ORM to allow searching and reviewing tourist accommodations such as hotels, resorts, etc.
  - Incorporated a landing page and an internal search engine using regular expressions to search for hotels and resorts.
  - Developed a REST API for authentication, authorization, and user dashboards, including profiles for hotels and resorts.
  - Implemented reviews, comments, and admin-controlled profile management features, allowing creation, updates, and deletions.

EXTRA-CURRICULAR ACTIVITIES, AWARDS, AND ACHIEVEMENTS

- **Champion** of the **PIM-Huawei Tech4Good Program 2021**, a global project competition to address social and environmental issues to meet SDG goals organized by **Huawei** in collaboration with **Purpose In Motion**.
- Completed **Deep Learning Specialization** by Deeplearning.ai.
- **Graduate** of the **Huawei Seeds For the Future 2021 Global Training Program** hosted online and organized by **Huawei** through completing courses titled **"5G Basics: Introduction to 5G Knowledge", "AI Basics: Overview of AI", "Cloud Basics: Development and Basic Concepts",** and **"Strategic Leadership"**.
- **Champion** of **Huawei Seeds For The Future 2021 Bangladesh**.
- **Champion** of the **Poster Presentation Idea Contest** event of **IEEE Computer Society BDC Meet & Greet 2019: Rajshahi** organized by the **IEEE Computer Society RUET Student Branch** in collaboration with the **IEEE RUET Student Branch**.
- **Second Runner-Up** of the **Patriotic, Modern Music** event at **RUET Cultural Week 2016,** organized by the **Directorate of Student Welfare, Rajshahi University of Engineering & Technology**.

REFERENCES

● **Dr. Boshir Ahmed,**
  Professor,
  Former Department Head,
  Department of Computer Science & Engineering,
  Rajshahi University of Engineering & Technology
  Email Address: boshir@cse.ruet.ac.bd

● **Md. Azmain Yakin Srizon,**
  Assistant Professor,
  Department of Computer Science & Engineering,
  Rajshahi University of Engineering & Technology
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  Former Department Head,
  Department of Computer Science & Engineering,
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● **Loutfouz Zaman,**
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