

NABIL WALID RAFI

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Dhaka, Bangladesh

OBJECTIVE

Seeking a researcher role in your laboratory to leverage my expertise in Medical Artificial Intelligence. My research interests are mainly in training large language models like google's medgemma to deploy an automated clinical agent that can reliably assist in medical operations. Aiming to contribute to innovative projects at the intersection of Artificial Intelligence and reliable clinical support agents in fields like visual question answering, tumor location detection, etc.

PROFESSIONAL EXPERIENCE

- Bangladesh Bank** October 2024 - December 2024
Research Intern Dhaka, Bangladesh
 - Developed scaled Big Data Rationalized Input Templates in Microsoft Excel to streamline annual financial data collection from national corporations.
 - Implemented Machine Learning frameworks for Banking Risk Management, specifically targeting Credit Fraud Detection to enhance institutional security protocols.
 - Conducted physical surveys and primary data collection across multiple banking institutions to identify key variables for fraud detection modeling.
 - Presented research findings as the lead author at an international conference, fulfilling publication requirements for the IEEE Xplore digital library.

EDUCATION

- Bangladesh University of Professionals** September 2021 - August 2025
B.Sc. in Information and Communication Engineering Dhaka, Bangladesh
 - GPA: 3.72/4.00
- Notre Dame College** January 2021
Higher Secondary Certificate Dhaka, Bangladesh
 - GPA: 5.0/5.0
 - Group: Science
 - Medium of Instruction: English Version
- Ideal School & College, Motijheel** May 2018
Secondary School Certificate Dhaka, Bangladesh
 - GPA: 5.0/5.0
 - Group: Science
 - Medium of Instruction: English Version

PUBLICATIONS

B=BOOK, C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [J.1] Md. Sazzadul Islam Prottasha, **Nabil Walid Rafi** (2025). **MedGemma vs GPT-4: Open-Source and Proprietary Zero-shot Medical Disease Classification from Images**. *arXiv*. DOI: 10.48550/arXiv.2512.23304
- [C.1] Nashrullah Naum, **Nabil Walid Rafi**, Elmeeh Hasan Shipra, Sana Ulla (2025). **An Explainable MLP-Based Framework for Dengue Classification using Stacked Ensembling with Boosting and Deep Learning Model**. In *28th International Conference on Computer and Information Technology (ICCIT)*, 19-21 December, 2025, Long Beach Hotel, Cox's Bazar, Bangladesh.
- [C.2] **Nabil Walid Rafi**, Md. Rejaul Karim, Uttam Kumar Roy (2025). **Smarter SME Lending: An AI-Driven Framework for Credit Risk Assessment Using Structured and Textual Data in Bangladesh**. In *International Conference on Intelligent Data Analysis and Applications (IDAA 2025)*, 12 - 13 December 2025, Daffodil International University, Dhaka, Bangladesh.
- [C.3] Fuad Iltimas Reddhow, **Nabil Walid Rafi** et al. (2025). **Simulation Study of Microstrip Patch Antenna with a Trident-shaped Slot for 5G Applications**. In *2nd International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM 2025)*, 27-28 June, 2025, Gazipur-1707, Bangladesh. DOI: 10.1109/NCIM65934.2025.11160305
- [B.1] **Nabil Walid Rafi** (2023). **Happiness Sources: The Secrets to Sources of Happiness (Book for Sale at Amazon)**. Book for sale at *Amazon*.
- [S.1] Md. Sazzadul Islam Prottasha, **Nabil Walid Rafi** (2025). **Multimodal AI MedGemma-4B Synergizing LoRA Compared with Federated Learning Models for Brain Tumor Classification**. Manuscript submitted for publication in *Franklin Open*.

HONORS AND AWARDS

- **Champion- National Photography Exhibition 2016** March 2016
Drik Gallery, Dhaka 
 - A photograph with a minimal setup obtained the best award
 - The award proved that even a minimal setup can yield good results with consistent attempts
- **Sonali Bank CEO & Managing Director Merit Award 2014** Month Year
Sonali Bank Limited 
 - The award was presented to the brightest students in terms of the national exam PSC Result.
 - The award was an academic milestone for continuing excellence, surpassing the national curriculum.
- **First Runner Up** Month Year
Team Forming Contest by BUP InfoTech Club for International Collegiate Programming Contest (ICPC-2022) 
 - Second Position in a problem-solving contest at Codeforces
 - Exceptional Handling of Complex Data Structures in Strict Time Constraint

LEADERSHIP EXPERIENCE

- **Conference Management Officer** 2019
Notre Dame College Model Inter United Nations 2019 
- **Smart City- Science Project Exhibition** 2014
2nd Science and Technology Festival, Ideal Science and Technology Aiming Research Council 
- **Organised The 2nd Notre Dame Math Festival 2018** 2018
Notre Dame Math club 
- **Solved Competitive Programming Problems in the online round** 2023-2024
ACM ICPC 2023 and ICPC 2024 

PROFESSIONAL MEMBERSHIPS

- **IEEE Member**, Membership ID: 100279904 May 2024 - December 2024

COURSES

- **Using Python to Access Web Data (Grade: 94.32%)** September 2024
- **Capstone: Retrieving, Processing, and Visualizing Data with Python (Grade 100%)** September 2024
- **Advanced Learning Algorithms (Grade 100%)** October 2024
- **Supervised Machine Learning: Regression and Classification (Grade 100%)** January 2024
- **Using Databases with Python (Grade: 100%)** September 2024
- **Unsupervised Learning, Recommenders, Reinforcement Learning (Grade: 100%)** October 2024
- **Programming for Everybody (Getting Started with Python, Grade: 97.43%)** September 2024
- **Python Data Structures (Grade: 96%)** September 2024
- **Basic Psychological First Aid by Bangladesh Red Crescent Society** November 2023
- **RCRC Induction and Basic First Aid by Bangladesh Red Crescent Society** November 2023
- **CPR, AED & First Aid** 2024

SPECIALIZATIONS

- **Machine Learning by Stanford University** December 2022
- **Python for Everybody by University of Michigan** December 2022

ADDITIONAL INFORMATION

Languages: Bengali (Native), English (Fluent), Hindi/Urdu (Fluent), French (Learning)

REFERENCES

1. **Md. Sazzadul Islam Prottasha**
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