

TANVIR MRIDHA

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[LinkedIn](#) | [GitHub](#) | [Google Scholar](#)

TECHNICAL SKILLS

Languages: C, C++, Java, Python **Web:** HTML, CSS, JavaScript **Database:** SQL (Oracle) **Mobile:** Android (Java) **Tools:** Oracle APEX, Arduino, IoT

PROJECTS

ArchRoute — Indoor Navigation System

DL • Image Processing • Python

- Built a deep-learning-based indoor navigation system detecting doors, stairs, and lifts.
- Implemented computer-vision-based pathfinding and floorplan analysis.

Android Apps — FlipRates & BookHive

Java • Android • API

- FlipRates:** Real-time currency converter with API integration.
- BookHive:** Online book marketplace with authentication and listings.

EWU Chronicle .NET — Event Management System

Oracle APEX • SQL

- Created a university-level event management and scheduling platform.
- Developed forms, CRUD operations, and automated admin workflows.

The Academia Navigator — Course Advising System

Oracle APEX

- Automated prerequisite checking, conflict detection, and advising flow.
- Designed dashboards and multi-role workflows.

Console Applications (Hotel Relax & Al-Jawda)

C • Java

- Built management systems for hotel booking, billing, and shop inventory.
- Implemented structured menus, CRUD logic, and role handling.

PUBLICATIONS & RESEARCH

TumorXAI: Self-Supervised Deep Learning Framework for Explainable Brain MRI Tumor Classification

ICIDA 2025

- Published in the **4th International Conference on Innovations in Data Analytics (ICIDA 2025)**.
- Applied self-supervised learning (SimCLR, BYOL, DINO, MoCo v3) with a ResNet-50 backbone for multi-class brain tumor MRI classification.
- Evaluated on 4,448 MRI scans across 17 tumor classes, achieving 99.64% accuracy, precision, recall, and F1-score using SimCLR.
- Integrated Explainable AI (Grad-CAM, Grad-CAM++, EigenCAM) to improve model interpretability and clinical trust.
- Paper: [10.48550/arXiv.2605.01999](https://arxiv.org/abs/10.48550/arXiv.2605.01999)

EXPERIENCE

Joint Secretary | EWU Robotics Club

2024 – 2025

- Coordinating workshops, competitions, and large events.
- Handling logistics, operations, and technical project support.

Associate Executive (Logistics & Promotion) | EWU Robotics Club

2023 – 2024

- Managed event operations, promotions, and volunteer coordination.
- Supported EWU Robofest and technical workshops.

Rapid Action Team Member | EWU National Robofest

2024

- Provided event-day technical & logistics support at national robotics events.

Cadet Sergeant | BNCC

2017 – 2019

- Led cadet teams, drills, and community participation programs.

EDUCATION

East West University — B.Sc. in Computer Science & Engineering
Govt. Yasin College, Faridpur — HSC (Science)

2021 – 2025 | CGPA: 3.23 | Major: Software Engineering
2017 – 2019 | GPA: 4.58