

# Kazi Farhana Faruque



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<https://github.com/Farhana-Faruque>

## Technical Skills

- **Languages** : C, C++, Java, Python
- **Web Development** : HTML, CSS, JavaScript
- **Framework** : React.js, FastAPI
- **Database** : Oracle, MySQL, PostgreSQL, MongoDB
- **Tools** : Git, Github, VS Code, Canva, Kaggle, Google Colab

## Projects

**MotionMatrix** | React, PostgreSQL, FastAPI | <https://github.com/Farhana-Faruque/MotionMatrix>

Developing a web application with hand detection for garment factories to track productivity, efficiency, and generate performance reports.

**gomokuPro** | React.js, Node.js, Express.js, MongoDB | <https://github.com/tjadnan1520/gomokuPRO>

Developed a web-based Gomoku game with an AI opponent and persistent game records, using Minimax and alpha-beta pruning with a custom evaluation function for smarter moves.

**DesktopApp** | Java, JavaFX | <https://github.com/Farhana-Faruque/DesktopApp>

Developed a desktop application for super shop management, enabling product, order, stock, and customer data management using design patterns such as Singleton, Observer, Command, Strategy, Bridge, and Memento.

**Small Language Model** | Pytorch, Jupyter Notebook | <https://github.com/Farhana-Faruque/Small-Language-Model>

Built a compact, efficient Transformer-based model for creative text generation, trained on TinyStories.

**Image Compression Tool** | C | <https://github.com/Farhana-Faruque/SPL-1>

Developed an image compression tool supporting lossless compression for PGM and BMP images and lossy compression for JPEG images.

## Education

**Bachelor of Science in Software Engineering**

Institute of Information Technology  
University of Dhaka (2023-Present)

**Expected Graduation:** Sep 2027

**CGPA:** 3.36(upto 4<sup>th</sup> semester)

**Higher Secondary Certificate**

Dhaka City College (2022)

**GPA:** 5.00

**Secondary School Certificate**

Bottomley Home Girls' High School (2020)

**GPA:** 5.00

## Work Experience

• **Content Executive** | Noor Physics Academy

September 2023 - May 2024.

Worked in the Physics Department at an ed-tech company under the supervision of team lead

## Participation and Achievements

- **3<sup>rd</sup> position**, IIT Girls Programming Contest organised by IITGC (IIT Girls Community)
- **2<sup>nd</sup> position**, Oil Painting arranged by CAA (Creative Art Academy)
- Anchored & Volunteered at Cefalo presents ITVerse 2023
- Participated in 8<sup>th</sup> Bangladesh Women's Mathematics Olympiad 2024
- Participated in 1st S.N.Bose National Science Festival 2025 (Poster Presentation)
- Participated the workshop on Building a Small Language Model from Scratch (BARTA LAB)

## References

**Professor Dr B M Mainul Hossain**

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