

# Nahian Fariha

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📁 Portfolio : nahianfariha.github.io

in LinkedIn : nahian-fariha

🐙 Github : NahianFariha

## Research Interests

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Machine Learning, Generative AI, Computer Vision.

## Education

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**International Islamic University Chittagong.**

Oct 2016 – Sept 2021

B.Sc. in Computer Science and Engineering. CGPA: 3.19/4.0

## Research Experience

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**Undergraduate Thesis :** Real-time Social Distance Estimation using YOLO Convolutional Neural Network and Euclidean Distance.

2020 - 2021

- Proposed a real-time system to estimate social distancing by analyzing video footage from six distinct environments: good quality, fuzzy, daylight, nightlight, less populated, and crowded.
  - The objective of this research was to estimate social distance in real-time and giving a tracking accuracy in percentage based on six different environments.
  - Used YOLO (You Only Look Once) pretrained on the COCO dataset to detect people and draw bounding boxes; computed centroids and applied Euclidean distance to measure interpersonal spacing.
  - Achieved 90 percent tracking accuracy across varied conditions, supporting real-time public safety monitoring in low and high visibility environments.
  - **Tech:** Python, OpenCV, YOLOv3, COCO Dataset, NumPy
- [Relevant GitHub Repository](#) [Thesis Book](#)

## Projects

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**GenAI Cold Email Generator**

[Repository](#)

- Developed a RAG-based Cold Email Generator using Llama 3.1, LangChain, ChromaDB, and Streamlit that helps software service companies automatically generate targeted outreach emails by extracting skills from job postings and matching relevant portfolios.

**Dot Pictures Studio Responsive Website**

[Client Side](#)

- Developed a desktop calendar with globally shared and synchronized calendars, allowing users to schedule meetings with other users. [Repository](#)

**Real-Time Social Distance Estimation using YOLO Convolutional Neural Network and Euclidean Distance**

[Repository](#)

- Detects people in real-time videos using YOLOv3 and calculates distances with Euclidean metrics to help monitor safe distancing; completed during the COVID-19 outbreak.

**Movie Recommender System using Machine Learning Techniques**

[Repository](#)

- Helps users discover personalized movie suggestions based on their preferences, built with Python, data preprocessing, vectorization, and Streamlit.

**Restaurant Profit Estimator using Linear Regression Model**

[Repository](#)

- A predictive analytics project that estimates restaurant profits based on city population data. Built with Python, NumPy, Matplotlib, and Linear Regression implemented from scratch in Jupyter Notebook.

**Academic Portfolio Website**

[Client Side](#)

- A professional academic portfolio website to showcase my projects, research, and achievements, built with React, Vite, Tailwind CSS, Node.js, and deployed on Github Pages. [Repository](#)

## Standardized Test Scores

**IELTS ( Computer Based ) - Overall Band Score : 7**

September 19, 2025

Listening: 7, Reading: 7, Writing: 7, Speaking: 6.5

**GRE**

November 11, 2024 and  
October 16, 2025

## Skills

**Programming Languages:** Python, C, C++, JavaScript

**Web Development:** React, Node.js, Tailwind CSS, Bootstrap, Vite, Flexbox, CSS Grid, Flowbite, HTML5, GitHub Pages

**Database:** PostgreSQL, ChromaDB

**Frameworks and Tools:** Git, Github, React.js, Jupyter Notebook, VS Code, Google Colab, Latex Editor

**Machine Learning and AI:** NumPy, TensorFlow, Pandas, Matplotlib, OpenCV, Machine Learning, Deep Learning, Computer Vision, RAG

**Others:** Google Workspace, Figma, Adobe (Photoshop, Illustrator), Procreate, Responsive Web Design

## Workshops and Certifications

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| 1. Workshop on LLMs Nexus: Bridging Technical Innovation and Ethical Horizons - Southern Illinois University, Carbondale | <a href="#">See more</a>      |
| 2. Machine Learning Specialization - Coursera  | <a href="#">Certificate</a>   |
| 3. Deep Learning Specialization - Coursera   | <a href="#">Certificate</a>   |
| 4. Linear Algebra for Machine Learning and Data Science - Coursera   | <a href="#">Certificate</a>   |
| 5. Python for Everybody Specialization - Coursera  | <a href="#">Certificate</a>   |
| 6. Google UX Design Specialization - Coursera  | <a href="#">Certification</a> |
| 7. The Complete Full-Stack Web Development Bootcamp(Udemy)   | <a href="#">See More</a>      |
| 8. Mastering Data Structures and Algorithms using C and C++(Udemy)   | <a href="#">See More</a>      |

## Work Experience

**Agent Banking Desk Officer - Islami Bank Bangladesh PLC** *Sept 2025 – Present*

- Hands-on experience with banking software for account management and financial transactions, ensuring accuracy and compliance.
- Assisting clients with opening and managing accounts, including savings, current, fixed deposits (TDR), and DPS; Supporting clients in financial product selection to meet their banking needs; cash management, customer service, and financial advisory.

**Founder and Artist - Dot Pictures Studio** *May 2021 – April 2024*

- Created and sold a variety of customized products, including cartoon/customized banners, graphics, illustrations, painted products, paintings, UX/UI designs, and painted tote bags.
- Managed the entire business process, from product design to delivery, ensuring customer satisfaction.
- Handled social media marketing, client communications, and order management.

**Web Application Development - Trainee, BASIS Institute of Technology and Management (BITM)** *Feb 2019 – April 2019*

- Collaborated in a 4-member team to develop two website projects, applying OOP basics, web fundamentals (HTML, CSS, JavaScript), and database management (MS SQL Server), while gaining hands-on experience with web programming and the full life cycle of real-world projects.

## Volunteering and Extracurricular Activities

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- Member of IIUC Photography Club and IIUC Computer Club.
- Active volunteer in university and community events, demonstrating teamwork and leadership.
- Art Practitioner, Photographer and Art Business Owner.

## References

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### **AHMED IMTEAJ**

Assistant Professor and I-SENSE Faculty Fellow,  
Department of Electrical Engineering and Computer  
Science,  
Florida Atlantic University, FL – USA

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### **FARZANA TASNIM**

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