

# N. I. MD. ASHAFUDDULA

Assistant Officer  
Software Development Team  
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## Research Interests

Machine Learning, Deep Learning  
Federated Learning, Knowledge Distillation, Decentralized Machine Learning, Explainable AI  
AI in Health, Medical Image Analysis, Pattern Recognition, Computer Vision  
Natural Language Processing

## English Language Proficiency

2023 IELTS: 6.5, (L: 7.5, R: 6.0, W: 6.5, S: 5.5)

## Education

- Dec 2019–Jan 2023 **MSc. Engineering in Computer Science & Engineering**, Dhaka University of Engineering & Technology, Gazipur, Dhaka, CGPA: 3.75 (Honors) / 4.00.  
Courses: Advanced Image Processing, Advanced Algorithm Design and Analysis, Medical Image Processing, Machine Learning, Cloud Computing, and Neural Network.  
**Thesis:** Skin cancer detection utilizing Intensity Value Estimation Model with a Deep Neural Network, **Advisor** : Dr. Rafiqul Islam
- 2013–Oct 2018 **BSc. Engineering in Computer Science & Engineering**, Rajshahi University of Engineering & Technology (RUET), Rajshahi, CGPA: 3.23 / 4.00.  
**Thesis:** Cold-Start Recommendation System Using K-Nearest Neighbor and Decision Tree in Movie Rating Prediction, **Advisor** : Biprodip Pal

## Employment History

- Feb 2022 – present **Assistant Officer**, Software development team, Mercantile bank, Dhaka, Responsible for designing and developing android applications and machine learning projects. Besides these, I am also responsible for designing client-side and server-side applications, managing well-functioning databases and applications, writing effective APIs, and writing technical documentation.
- 2019 – 2020 & 2021 – 2022 **Android Consultant**, Software team, MedEasy, Banasree, Dhaka, Responsible for analyzing user's data to predict the possible treatments using machine learning techniques by ensuring reusable, and reliable java code and also requirement analysis & feature improvement to ensure the best possible application performance.
- Aug 2018 – Sep 2019 **Software Engineer, IT**, Android team, Avis technologies ltd, Panthapath, Dhaka, Responsible for designing and developing advanced android applications. Bug fixing and improving application performance, publishing apps on google play store ensuring app responsiveness, and developing and integrating APIs.

## Publications

### Journal Articles

- 2024 N. I. Md. Ashafuddula and Rafiqul Islam. Ivc-mdnet: Intensity value estimation model combined with a transfer learning approach for melanoma skin cancer diagnosis. *SN Computer Science*, volume 5, page 435, 2024.
- 2023 N. I. Md. Ashafuddula, Bayezid Islam, and Rafiqul Islam. An intelligent diagnostic system to analyze early-stage chronic kidney disease for clinical application. *Applied Computational Intelligence and Soft Computing*, volume 2023, page 17. Hindawi, Nov. 2023.
- 2023 N. I. Md. Ashafuddula and Rafiqul Islam. Melanoma skin cancer and nevus mole classification using intensity value estimation with convolutional neural network. *Computer Science*, volume 24, Oct. 2023.
- NI Md Ashafuddula, Rafiqul Islam, et al. ContourtI-net: Contour-based transfer learning algorithm for early-stage brain tumor detection. *International Journal of Biomedical Imaging*, volume 2024. Hindawi.

In Conference Proceedings

- 2018 Bayezid Islam, N. I. Md. Ashafuddula, and Firoz Mahmud. A machine learning approach to detect self-care problems of children with physical and motor disability. In *2018 21st International Conference of Computer and Information Technology (ICCIT)*, pages 1–4, 2018.

## Research Experiences

- Jan 2024 – Continuing **N. I. Md. Ashafuddula, Faruk Ahmed, Rafiqul Islam, and Bayezid Islam**, CaX-Net: A Stacking Ensemble Approach with Optimized Hyperparameters for Multi-Cancer Diagnosis, In *Preparation*.

## Peer Reviewer

- 2023-present Computers in Biology and Medicine (4)  
2023-present SN Computer Science (1)  
2023-present Pattern Analysis and Applications (4)

## Projects

- 2023 ML focused Fraudulent Transactions Analysis, On-going, Mercantile Bank  
2024 Inward Remittance Declaration Form-C (Android app), On-going, Mercantile Bank  
2023 Mbl Islami App (Android app), Mercantile Bank  
2022 CorporatePay (MBL Corporate Internet Banking), Mercantile Bank  
2019–2022 MedEasy (Android app), online pharmacy service  
2018–2019 Office inventory management (Android app), Avis Technologies Ltd.  
2018 Light of Hope (Android app), Avis Technologies Ltd.

## Computer skills

- Languages Python, Java  
Frameworks Scikit Learn, Keras, TensorFlow, Java (Core Java, Spring Boot), Bootstrap  
Web Techs HTML 5, CSS, JSP, Javascript  
Database MySQL, MSsql, Firebase Realtime DB  
Tools Google Colab, Anaconda, Android studio, IntelliJ

## Recognitions & Awards

- 2016 1st Runner-Up, project: Nirapod Sorok (Android app) in *IEEE Robodroid Championship* (Mobile App contest 2016), Rajshahi University of Engineering & Technology  
2016 Cricket tournament champion, *Inter department cricket tournament, RUET*.  
2017 Cricket tournament runner-up *Inter department cricket tournament, RUET*.

## Training Programs

- 2022 **Basic Banking Training**, MBLTI, Mercantile Bank.  
2018 **Machine Learning**, *Coursera online course*, by Andrew Ng, authorized by Stanford university.

## Referees

### PROFESSOR DR. RAFIQUUL ISLAM

Professor, Department of  
Computer Science & Engineering  
Dhaka University of Engineering & Technology  
(DUET)

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### BIPRODIP PAL

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### FIROZ MAHMUD

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### MUHAMMAD MAHMUD HASAN

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