# MEHRIN ANANNYA

Institute of Information Technology, ◇ Jahangirnagar University (JU), Dhaka, Bangladesh
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## RESEARCH INTERESTS

Natural language processing, artificial intelligence(AI), software engineering, human-AI interaction, machine learning, software & cyber security

## EDUCATION

**Jahangirnagar University** Dhaka, Bangladesh
M.Sc. in Information Technology
CGPA: 3.92/4.00 (Position: 2nd)
Thesis: Performance Measurement Model of Mobile User Connectivity in Femtocell/Macrocell Networks using Fractional Frequency Re-use Scheme

**Jahangirnagar University** Dhaka, Bangladesh
B.Sc. in Information Technology
CGPA: 3.75/4.00 (Position: 6th)
Project: Automated CV Processing along with Psychometric Analysis in Job Recruiting Process

## PUBLICATIONS

**Published**

Tasfia Israt, **Mehrin Anannya**, Sadia Mahfuz, Riad Mashrub Shourov, Md. Biplob Hosen, Rashed Mazumder, **"Unified Bangla: A Transformer-Based Framework for Bangla Dialect Identification and Cross-Dialectal Translation"**, 2026 IEEE International Conference on Quantum Photonics, Artificial Intelligence, and Networking. *[Conference]*

Sadia Afrin, Afrin Ahmed, **Mehrin Anannya**, Samrat Dey, Md Moshiur Rahman, Rashed Mazumder, **"An Intelligent Assistive System for Autistic Learners"**, Engineering Reports. *[Journal]*

Sadia Mahfuz, Tasfia Israt, **Mehrin Anannya**, Md. Biplob Hosen, Rashed Mazumder, **"Explainable AI Based Multi-Class Pneumonia Classification and Anomaly Detection from Chest X-ray "** , 2nd IEEE Conference on Computing Applications and Systems (COMPAS 2025) *[Conference]*

Jannatul Ferdous Muna, Abier Farzana Hoque, Rahul Das, **Mehrin Anannya**, Rashed Mazumder, Md. Biplob Hosen, **"Hybrid Approach towards Multi-Label Semi-Supervised Emotion Classification"**, 2nd IEEE Conference on Computing Applications and Systems (COMPAS 2025) *[Conference]*

Kazi Fatema, Samrat Kumar Dey, **Mehrin Anannya**, Risala Tasin Khan, Mohammad Mamunur Rashid, Chunhua Su, Rashed Mazumder, M. Shamim Kaiser, **"Federated XAI IDS: An explainable and safeguarding privacy approach to detect intrusion combining federated learning and SHAP"**, Future Internet, MDPI, May 2025. *[Journal]*

Adiba Masud,Md. Biplob Hosen, Md. Habibullah, **Mehrin Anannya**, M. Shamim Kaiser,**"Image captioning in Bengali language using visual attention"**, PLOS One, February 2025. *[Journal]*

Md. Biplob Hosen; Sabbir Ahmed; Bushra Akter; **Mehrin Anannya**, **"Impact, Causation and Prediction of Socio-Academic and Economic Factors in Exam-centric Student Evaluation Measures using Machine Learning and Causal Analysis"**, 13th International Conference on Electrical and Computer Engineering (ICECE), 2024, *[Conference]*

Kazi Fatema, **Mehrin Anannya**, Samrat Kumar Dey, Chunhua Su, Rashed Mazumder, **"Securing Networks: A Deep Learning Approach with Explainable AI (XAI) and Federated Learning for Intrusion Detection"**, International Conference on Data Security and Privacy Protection, 260-275, October 2024. *[Conference]*

**Mehrin Anannya**; Most. Shahera Khatun, Md. Biplob Hosen, Sabbir Ahmed, Md. Farhad Hossain, M. Shamim Kaiser, **"Eligible Personal Loan Applicant Selection using Federated Machine Learning Algorithm"**, IJACSA, The Science and Information (SAI) Organization. *[Journal]*

Md. Sazzadur Rahman, Tapotosh Ghosh, Nahid Ferdous Aurna, M. Shamim Kaiser, **Mehrin Anannya**, A.S.M. Sanwar Hosen, **"Machine learning and internet of things in industry 4.0: A review"**, Measurement: Sensors, August 2023. *[Journal]*

Hosen, M.B., Farin, N.J., **Anannya, M.**, Islam, K., Uddin, **"Quality Analysis of PATHAO Ride-Sharing Service in Bangladesh"**, Proceedings of International Joint Conference on Advances in Computational Intelligence (pp.597-611), May 2022. *[Book Chapter]*

**Mehrin Anannya** and Riad Mashrub Shourov, **"Performance Measurement Model of Mobile User Connectivity in Femtocell/Macrocell Networks using Fractional Frequency Re-use Scheme"**, International Journal of Advanced Computer Science and Applications(IJACSA),9(5), 2018. *[Journal]*

Firoz Ahmed; **Mehrin Anannya**; Tanvir Rahman; Risala Tasin Khan, **"Automated CV Processing along with Psychometric Analysis in Job Recruiting Process"**, International Conference on Electrical Engineering and Information Communication Technology(ICEEICT), October 2015. *[Conference]*

**Under Review**

Tahsina Tanzin; **Mehrin Anannya**; Md. Biplob Hosen; Riad Mashrub Shourov; Rashed Mazumder, **"SDLC Model Selection through NLP-Based Requirement Analysis from ToR"** *[Journal]*

**Mehrin Anannya**; Md. Biplob Hosen; Riad Mashrub Shourov; Alema Khatun; Taskin Noor Turna; Md. Ebrahim Hossain, **"A Systematic Literature Review To Predict Software Defects From Code Smells Using Machine And Deep Learning Techniques"** *[Journal]*

## TECHNICAL SKILLS

| | |
|---|---|
| **Programming Language** | Java, C, C++, Python, R |
| **Backend Framework** | J2EE, Spring Web MVC, Thymeleaf, Struts, JSF, NodeJS |
| **Database** | Oracle, MySQL, MongoDB, H2, SQLite, ORM - JPA, Hibernate, MyBatis, iBatis |
| **Python (ML & DL Libraries)** | NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, PyTorch, Keras |
| **NLP** | Hugging Face, Tokenizer, lemmatization, sentiment analysis, BERT |

## PROFESSIONAL EXPERIENCES

**Faculty Member** Feb 2021 - Current
*Institute of Information Technology, Jahangirnagar University* *Dhaka, Bangladesh*

- Taught courses: Software Engineering, Database Management Systems, Data Structure & Algorithm, C Programming, Human Computer Interaction, Object Oriented Programming, Data Mining and Knowledge Discovery, Internet and Web Technology, Software Testing & Quality Assurance
- Supervised Thesis:
  - Unified Bangla: A Cross-Dialectal Translation System for Regional Dialects of Bangladesh.
  - SDLC Model Selection through NLP-Based Requirement Analysis

**Faculty Member** Jul 2016 - Jul 2019
*Information and Communication Technology, Bangladesh University of Professionals (BUP)* *Dhaka, Bangladesh*

Taught courses: Software Engineering, Database Management Systems, Data Structure & Algorithm, C Programming

**Junior Software Engineer (Java Developer)** May 2015-Jul 2016
*Genweb2 Ltd.* *Dhaka, Bangladesh*

Projects: Foreign Aid Management System (FAMS), Booking Management Software (Katair)

## SCHOLARSHIPS

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| Jahangirnagar University | Earned merit-based scholarships each semester from Jahangirnagar University |
| Bangladesh Government | Received government scholarship to have training in Java Web-App in India (Position-1st) |

## TRAINING

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| Java (Infosys Ltd.) | Internship on Java Web based Application (Mysore, Bangalore, India) |
| Android (Datasoft Systems Ltd.) | Internship on Android (Industrial Attachment) (Bangladesh) |

## EXTRA CURRICULAR ACTIVITIES

- Ex-Moderator, BUP InfoTech Club (Organized National Programming Contest, BUP) (as a Teacher)
- Coach, programming teams in Bangladesh University of Professionals (as a Teacher)
- Member, Bangladesh Computer Society