

Zarin Rafah Chowdhury

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Research Interest

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| Sentiment Analysis | Clinical Decision Support Systems |
| • Natural Language Processing | • Explainable AI (XAI) in Healthcare |
| • Bio-medical Natural Language Processing | |

Education

Bangladesh Army University of Science & Technology (BAUST), B.Sc in Computer Science & Engineering	January, 2019 – January, 2023
• GPA: 3.79/4.0 (marksheets) • Academic Excellence: Secured 3rd position out of 105 students • Undergraduate Thesis: " <i>Crime Text Classification and Drug Modeling from Bengali News Articles : A Transformer Network-Based Deep Learning Approach</i> " In this study, we scraped Bengali news from renowned <i>The Daily Prothom Alo</i> (2013–2021), flagged drug mentions, and filtered crime-related content. Using BERT, we extracted key features and then classified crimes by type. To isolate drug-linked narratives, we applied zero-shot learning with tailored transformers and used Named Entity Recognition to trace location mentions.	

Teaching Experience

Port City International University Lecturer, Department of Computer Science & Engineering Course Conducted: 1) Machine Learning, 2) Digital Image Processing, 3) Computer Graphics, 4) Object Oriented Programming Language.	May, 2023 - Present
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Publications

- Hossain, M.M., Chowdhury, Z.R., Akib, S.R.H., Ahmed, M.S., Hossain, M.M. and Miah, A.S.M., 2023, December. **Crime text classification and drug modeling from bengali news articles: A transformer network-based deep learning approach**. In 2023 26th International Conference on Computer and Information Technology (ICCIT) (pp. 1-6). IEEE. DOI: 10.1109/ICCIT60459.2023.10441195
- Jahan, I., Chowdhury, M.Z., Nur, S., Chowdhury, Z.R., Barua, R., Amrine, T. and Sajib, M.H.U., 2024, December. **Bengali Hate Speech Categorization: A Comparison of Hybrid Deep Learning and Transformer-Based Models**. In 2024 International Conference on Recent Progresses in Science, Engineering and Technology (ICRPSET) (pp. 1-6). IEEE. DOI: 10.1109/ICRPSET64863.2024.10955953
- Islam, A.J., Tushar, M.R.A., Salehin, S., Chowdhury, Z.R., Jahangir, M.A. and Datta, P., 2025. **Data-Driven Forecasting of Heart Failure Readmissions: Balancing Accuracy and Interpretability With Machine Learning** In 2025 16th International IEEE Conference on Computing, Communication and Networking Technology (ICCCNT).

Research Contribution

1. Title: **Transformer-Based Approach for Forecasting Solar Irradiance in Southern Bangladesh**. Proceedings of the International Conference on Multidisciplinary Computer Science, Electrical, Business & Literature, Dhaka, Bangladesh.
Role: Corresponding author.
2. Title: **Multi-Architectural Deep-Learning and Hybrid Ensemble Approaches for Early Alzheimer's Classification**.
Role: 1st author, Corresponding author.
3. Title: **SegMorphFormer: A Hybrid Transformer-Attention Model for Volumetric Brain Tumor Segmentation**.

Role: 1st author, Corresponding author.

Skills & Core Strength

- Languages:** C++, C, Java, Python.
- **Data Analytic Tools:** MS Excel, Looker Studio, Tableau ,Power BI.
 - **Designing Tools:** Canva, Visme, Adobe Express.
 - **Spoken Languages:** English, Bengali.
- Strong Leadership.**
- Adaptability.
 - Robust Communication Skills.
 - Excellent Planning Skills .
 - Competitive Analytical Skills.

Extra Curricular Awards & Voluntary Experience

1. Batch Coordinator - Department of CSE, <i>Port City International University (PCIU)</i> <i>Coordinate academic and administrative activities for a batch of 50 undergraduate students</i>	2023 - Present
2. Thesis Supervisor- Department of CSE, <i>Port City International University (PCIU)</i> <i>Supervising 6 undergraduate thesis projects focused on nlp, image processing, and biomedical applications</i>	June,2025 - Present
3. Advisory Panel Member- PCIU Computer Club (PCC), <i>Provided strategic guidance on club activities related to programming, machine learning, and technical competitions</i>	October,2024 - Present
4. The Duke of Edinburgh - Bronze Award <i>The Duke of Edinburgh's Award Foundation Bangladesh.</i>	2014 - 2015
5. Vice President - BAUST Cultural Society <i>Bangladesh Army University of Science & Technology .</i>	2021 – 2022
6. Deputy Director (Event Management) - Career Society of BAUST <i>Bangladesh Army University of Science & Technology .</i>	2021 – 2023
7. Campus Ambassador <i>bdapps, Bangladesh's leading mobile app store.</i>	2021 – 2022
8. Honorable Mention <i>ICPC Dhaka Regional, ICPC,2020 .</i>	2021

Licenses & certifications

1.Introduction to Big Data <i>University of California San Diego</i> Coursera	Sep, 2020
2. Business Data Analysis <i>By: Laura Paton</i>	Mar, 2023
3. Business Case Solving <i>10 Minutes School</i>	Jan, 2023
4. Introduction to Spanish Alison	Jun, 2020

Recommendation
