Sarbajit Paul Bappy

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About Me

Final-year Computer Science and Engineering student at Daffodil International University with an Erasmus+ exchange at Mälardalen University, Sweden. Passionate about deep learning, computer vision, and explainable AI with applications in healthcare and agriculture. On going publication and ongoing research on disease detection from medical and agricultural images. Strong commitment to impactful research, teaching, and global collaboration, aspiring toward graduate studies and academia.

Education

Daffodil International University, Dhaka, Bangladesh
Bachelor of Science in Computer Science and Engineering — May 2022 – Present
CGPA: 3.94/4.00

Mälardalen University, Västerås, Sweden
Erasmus+ Exchange Semester in Computer Science and Engineering — Jan 2025 – Jun 2025

Govt. M. M. City College, Khulna, Bangladesh
HSC in Science — Jul 2017 – Dec 2019
GPA: 5.00/5.00

Work Experience

- **Teaching Assistant**, Department of Computer Science and Engineering, Daffodil International University (DIU) *October 2025 – Present*
  - Working under the supervision of Professor Dr. Fernaz Narin Nur.
  - Assisting in undergraduate courses, laboratory sessions, and coursework evaluation.
  - Providing academic and research support within the department.

Research Work & Publications

Journal Articles (Published)

1. Sohel, A., Turjy, R. C. D., **Paul, S. P.**, Assaduzzaman, M., Marouf, A. A., Rokne, J. G., & Alhajj, R. (2025). **SkinVisualNet: A Hybrid Deep Learning Approach Leveraging Explainable Models for Identifying Lyme Disease from Skin Rash Images.** *Machine Learning and Knowledge Extraction*, 7(4), 157.
   DOI: 10.3390/make7040157

Journal Articles (Under Review / Submitted)

1. **JackVisualNet: A Fine-Tuned Hybrid Deep Learning Model for Jackfruit Disease Classification with Explainable AI.** *PeerJ Computer Science.* (Major Revision)
2. Bappy, S. P., Tarafdar, S., Alvi, S. T., Turjy, R. C. D., & Sohel, A. **Federated Learning for Securing Healthcare Data: A Comprehensive Review on Privacy, Robustness, and Defense Mechanisms.** *Computers in Human Behavior Reports.* (Under Review)

3. **FedMAM: A Lightweight Federated Learning Framework with DeepMedA3-Net for Privacy-Preserving Cross-Modality Medical Image Analysis.** *IEEE Journal of Biomedical and Health Informatics (JBHI).* (Submitted)

Book Chapter

1. **Evaluating Deep Learning Models and Explainable AI for Mushroom Classification.** *Taylor & Francis Group.* (Accepted for Publication)

Conference Papers (Accepted / In Press)

1. Akter Bithi, S., Nur, F. N., **Paul Bappy, S.**, Moon, N. N., & Chakraborty, A. **An Enhanced Hybrid Cipher With Vigenere And Dynamic Caesar With Key-Position Swapping For Secure Encryption.** *Proceedings of IEEE QPAIN 2026.* (Accepted with Minor Revision; To be included in IEEE Xplore, Scopus Indexed)

Conference Proceedings (Abstract Published)

1. Paul, S. P., Turjy, R. C. D., & Sohel, A. **A Hybrid Deep Learning Approach for Identifying Jackfruit Leaf and Fruit Disease.** *Proceedings of IEEE CS BDC Symposium 2024*, Vol. 3.
2. Turjy, R. C. D., Paul, S. P., & Sohel, A. **A Hybrid Deep Learning Approach for Identifying Lyme Disease from Skin Rash Images.** *Proceedings of IEEE CS BDC Symposium 2024*, Vol. 3.

Projects

- **Rainfall and Temperature Prediction:** ML-based analysis for climate and agriculture forecasting.
- **Population Analysis with MySQL:** Demographic and urbanization insights using advanced SQL queries.
- **Email Spam Classification:** ML models for spam filtering using Random Forest and Decision Trees.

Courses & Certifications

- **Supervised Machine Learning: Regression and Classification** (Instructor: Andrew Ng) – Coursera, DeepLearning.AI (2023–2024).
- **CSE Fundamental** – Phitron.io (2022–2024). Includes DSA, OOP, DBMS, AWS, and ML foundations.

Technical Skills

Programming: Python, C, C++, SQL, HTML, JavaScript
ML/DL Frameworks: TensorFlow, Keras, Scikit-Learn, OpenCV
Tools: Git/GitHub, Jupyter Notebook, Pandas, NumPy, Matplotlib, Covidence, VS Code
Research Tools: Covidence, SPSS, LaTeX

Awards

- Erasmus+ ICM Exchange Scholarship, Mälardalen University, Sweden (2025)
- 29th Position, Take Off Programming Contest (2022)
- Regional Winner, Jatiyo Shishu Kishore Quiz Utsav (2016)
- Regional Winner, National Creative Talent Hunt Competition (2013–2016)

Leadership & Volunteering

- Vice Chair (Technical), IEEE DIU SB CS Chapter (2024 – 2025)
- Secretary, IEEE DIU SB WIE Affinity Group (2024 – 2025)
- Campus Organizer, Brikkhobondhu (2024)

References

Dr. Fernaz Narin Nur
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Amir Sohel
Assistant Professor
Department of Computer Science and Engineering
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I hereby declare that all the information provided above is true and accurate to the best of my knowledge and belief.