SM Shaqib

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Portfolio • LinkedIn • GitHub Dhaka, Bangladesh

Education

BSc Daffodil International University, Dhaka September 2025
Program: Computer Science and Engineering
CGPA: **3.92/4.00**

EXPERIENCE

AI Agent Developer, StudyNet October 2025 - Current

- I am working as an AI agent developer, building an RAG-based LLM system using FAISS vector database, Django Framework. The custom agent helps students find information related to higher education.

Research Assistant, DIU NLP & ML Lab June 2025 – December 2025

- Worked as a research assistant in a lab, collaborating with a professor from Deakin University, Australia, on detecting fraudulent activities in bKash online transactions using NLP-based techniques.

Trainer, Advance ML and DL Bootcamp, DIU NLP & ML Lab September 2024 – May 2025

- I trained more than 30 students in the fundamentals of machine learning and deep learning, assisted them with implementing deep learning concepts in code, and supported their paper publication with my guidance.

Research

1. **Shaqib, S. M.**, Alo, A. P., Ramit, S. S., Rupak, A. U. H., Khan, S. S., & Rahman, M. S. (2024). Vehicle Speed Detection System Utilizing YOLOv8: Enhancing Road Safety and Traffic Management for Metropolitan Areas. *arXiv preprint arXiv:2406.07710*. **[Link]**
2. Hasan, M. M., **Shaqib, S. M.**, Akter, S., Alo, A. P., Khushbu, S. A., & Huda, M. N. (2025). A transfer learning approach to classify insect diversity based on explainable AI. *Discover Life*, *55*(1), 1-15. [**Q2 – Link**]
3. Alo, A. P., Richi, R. F., **Shaqib, S. M.**, Alam, K. R., Khushbu, S. A., & Rahman, M. S. (2025, February). Transfer Learning Techniques for Efficient Deep Neural Networks in Real-Time Strawberry Freshness Evaluation. In *International Conference on Innovations in Biotechnology and Health Sciences* (pp. 87-101). Singapore: Springer Nature Singapore. [**Link**]
4. Badhon SMSI, Khushbu SA, **Shaqib SM**, Ali MA, Anik AH, Hossain KSMT. Explainable AI for skin disease classification using gradient-weighted class activation mapping and transfer learning in digital health to identify contours. DIGITAL HEALTH. 2025;11. doi:10.1177/20552076251404523 **[Q2 - Link]**
5. **SM Shaqib**, Zafar Muhammed Akram, Rafia Anjum, and Md. Sadekur Rahm (2025). Enhanced U-Net Architecture with VGG16 Backbone and Attention Mechanisms for Automated Nasal Sinus Disease Segmentation [**In press** in 8th International Conference on Recent Trends in Image Processing & Pattern Recognition (RTIP2R)]

6. Islam, M. S., **Shaqib, S. M.,** Ramit, S. S., Khushbu, S. A., Sattar, A., & Noori, S. R. H. (2024). A deep learning approach to detect complete safety equipment for construction workers based on yolov7. *arXiv preprint arXiv:2406.07707*. **[Link]**
7. Khan, S. S., Mondal, P. K., **Shaqib, S**., Ahmed, N., Prova, N. N. I., & Sattar, A. (2024, June). Performance Analysis of LSTM and Bi-LSTM Model with Different Optimizers in Bangla Sentiment Analysis. In *2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-7). IEEE. **[Link]**

SKILLS

Programming: Python, C, C++, Java Machine Learning Algorithm: Intermediate Level Machine Learning **Framework and Libraries**: TensorFlow, PyTorch, Scikit-learn, Keras Visualization: Matplotlib, Seaborn, OpenCV, PIL, Pandas, NumPy

Data Processing: Exploratory Data Analysis, Feature Selection

Operating System: Windows, Linux, Mac

General Computer Skills: Office Applications (Microsoft Office, Google Suite) LaTex.

PROJECTS

- **LLM-Powered PDF Summarization Tool:** Built an end-to-end NLP application using Hugging Face API, and Streamlit to automate document analysis and summarization. The tool processes large PDFs, extracts key insights, and enables semantic search with interactive Q&A, showcasing practical applications of retrieval-augmented generation and LLM-based information extraction.
- **Nasal Disease Segmentation**: Build an web platform using U-Net model with attention mechanism architecture and deployed it in hugging face space which can be useful for medical purpose.

Extra-Curricular Activities

Data Visionary: National Data analytics Competition: I have volunteered for "Data Visionary: National Data Analytics Competition - 2025" contest which is a platform designed for students passionate about data science to showcase their talents, collaborate with peers, and tackle real- world challenges.

Crack Dataset : I have active participation in organizing DIU Intra University Data Science Contest "Crack Dataset 2024". Which proves my experience in teamwork and communication.

Assistant General Secretary of DIU NLP and ML Lab : I was selected as Assistant General Secretary at DIU NLP and ML Research Lab to organize several conferences and contests related to machine learning.

AWARDS AND ACHIEVEMENT

• Performance-based scholarship at Daffodil International University & Ranked 4th in batch.   2025

• First runner-up Data science Olympiad 2nd international Conference on Big Data and IoT   2023

• 1st runner up in intra university startup competition DIU Accelerator cup 2023   2023

• 12th position at Intra University contest Unlock the Algorithm Contest   2023