Md. Shahidul Salim

CSE, KUET, Khulna, Bangladesh

ss@cse.kuet.ac.bd Github Huggingface Portfolio Linkedin

Job Experience

July 2022 – Present — **Faculty member,** Department of CSE, Khulna University of Engineering & Technology (KUET),Bangladesh

April 2021 – March 2022 — **Faculty member,** Department of CSE, Uttara University, Bangladesh

Research Interest

- Natural language processing - Stemmer, Lemmatizer, Transformer models (Token classification, Fine-tuning a masked language model, Translation, Summarization, Training a causal language model, Question answering), Fine-turning LLMs
- Machine learning, Deep learning, Multivariate and univariate time series

Education

2016 – 2021 — **B.Sc. in Computer Science and Engineering,** Khulna University of Engineering & Technology (KUET),Bangladesh
– **CGPA** 3.86 out of 4.00 (4th position in my department)

Research Publications

Journal Articles

1. Ashiqussalehin, M., Jahan, K. N., Rahaman, M. A., & Salim, M. S. (2022). Human abnormal behavior detection using convolution neural network. *Specialusis Ugdymas*, *1*(43), 4076–4083.

Conference Proceedings

1. Hossain, L., Hossain, I., Salim, M. S., Raju, S. M. T. U., & Saha, J. (2023). A novel technique for classification of motor imagery eeg signal based on deep learning approaches. In *Proceedings of the 2nd international conference on big data, iot and machine learning (bim 2023)*. (Accepted).
2. Nabil, A., Das, d., Salim, M. S., Arifeen, S., & Fattah, H. M. A. (2023). Bangla emergency post classification on social media using transformer based bert models. In *6th international conference on electrical information and communication technology (eict 2023)*. (Accepted).
3. Promi, R. T. H., Nazri, R. A., Salim, M. S., & Raju, S. M. T. U. (2023). A deep learning approach for non-invasive hypertension classification from ppg signal. In *2023 international conference on next-generation computing, iot and machine learning (ncim)* (pp. 1–5). doi:10.1109/NCIM59001.2023.10212940
4. Salim, M. S., Murad, H., Das, D., & Ahmed, F. (2023). Banglagpt: A generative pretrained transformer-based model for bangla language. In *2023 international conference on information and communication technology for sustainable development (icict4sd)* (pp. 56–59). doi:10.1109/ICICT4SD59951.2023.10303383
5. Salim, S., Islam, T., Zannat, R., Mia, N., Fuad, M., & Murad, H. (2023). Towards developing a transformer-based bangla typing error correction model: A deep learning-based approach. In *2023 international conference on information and communication technology for sustainable development (icict4sd)* (pp. 75–78). doi:10.1109/ICICT4SD59951.2023.10303361

6 Ahmed, T., Hossain, S., Salim, M. S., Anjum, A., & Azharul Hasan, K. M. (2021). Gold dataset for the evaluation of bangla stemmer. In *2021 5th international conference on electrical information and communication technology (eict)* (pp. 1–6). doi:10.1109/EICT54103.2021.9733662

7 Salim Shakib, M. S., Ahmed, T., & Azharul Hasan, K. M. (2019). Designing a bangla stemmer using rule based approach. In *2019 international conference on bangla speech and language processing (icbslp)* (pp. 1–4). doi:10.1109/ICBSLP47725.2019.201533

Under Review and Ongoing Research

Under Review

- An Applied Statistics Dataset for Human vs AI-Generated Answer Classification
- Agricultural Recommendation System based on Multivariate Weather Forecasting Model
- Detecting AI-Generated Assignments in Educational Evaluation: A Transformer-Based Approach
- A Suffix Independent Algorithm for Stemming Bangla Words using Finite State Transducer

Ongoing Research

- Building a Bangla Text Summarization Dataset for Transformer Models: A Comprehensive Guide
- Bangla context-based question answering with custom dataset using transformer model
- Automatic Text Summarization in Bengali: A Study on the Effectiveness of the mT5 Transformer Model

Awards and Projects

Awards

- Dean's Award by Faculty of Electrical & Electronic Engineering (1st year,2nd year, 3rd year,4th year)

Projects

- **Medical LLM Chatbot** - Chat with pdf using LLM(LlamaV2) langchain and streamlit
- **KUET Chat Bot** - Information about KUET
  – Students can chat with the bot and get information about KUET.
- **Efficient Backlog Routine Generator** - Building with Python and Flask for Streamlined Task Management
- **Secure File Locker** - Implementing RSA Encryption Algorithm with Python and Flask for Data Protection
- **Daily Expense Management on iOS** - A User-Centric Mobile Application for Efficient Financial Tracking
- **Anonymity-Preserving Post Web Application** - Implementing Python and Flask for Secure and Confidential Content Sharing
- **Windmill Simulation** - A Computer Graphics Project Implemented in C++
- **Booklist** - A Mobile Application for Academic Booklists at Khulna University of Engineering & Technology (KUET) across Various Departments with PDF Links to the Books
- **Statistics exam** - Design and Implementation of a Statistics Exam Generation System for Students using Python and Flask with Randomized Data Generation
- **Smart Home Automation with IoT** - Integrating NodeMCU (ESP8266) with Python and Flask
- **Counterfeit note detection** - Fake Bangladeshi Banknote Detection using Convolutional Neural Networks (CNN)
- **Brain Tumor Detection using Convolutional Neural Networks (CNN)** - An AI-based Approach for Accurate Diagnosis

Awards and Projects (continued)

- **Building a Social Media Website** - Harnessing HTML, CSS, JavaScript, ASP.NET, and C# for Dynamic Online Interaction

Online Courses

- Natural language processing (NLP) using libraries from the Hugging Face ecosystem – Transformers, Datasets, Tokenizers, Accelerate and Hugging Face Hub
- LangChain- Develop LLM powered applications with LangChain(Udemy)
- Supervised Machine Learning: Regression and Classification
- NLP - Natural Language Processing with Python(Udemy)
- Hands-On Natural Language Processing (NLP) using Python(Udemy)
- Probability and Statistics for Business and Data Science(Udemy)

Miscellaneous Experiences

- Ibex(Supercomputer) fine-tune LlamaV2 for medical data

Volunteer Experience

- 2023 Research paper review (Worked as a reviewer for the conference AAAI-2024).
- 2017-2019 Dream (Voluntary Blood Donation Society of KUET).
- 2018 Volunteer in Bitfest 2019 arranged by CSE association.

Technical Skills

Programming Languages

- Python, HTML, C, CSS, C++, LaTeX Java, Javascript

Python Frameworks

- Scikit-learn, Pytorch, Tensorflow, Matplotlib, Keras, Transformer

Modern AI

- Natural Language Processing, Machine Learning, Deep Learning, Data Analysis, Data Visualization