

Golam Jilani

Dhaka, Bangladesh

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Research Interests

Machine Learning; Computer Vision; Natural Language Processing; Data Mining

Academic Background

Shahjalal University of Science & Technology

Sylhet, Bangladesh.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE & ENGINEERING; GPA: 3.51/4.00 (3.73 IN THE LAST TWO YEARS)

March 2023

Research Experience

Research Assistant

Nov 2022 - Feb 2023

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, SHAHJALAL UNIVERSITY OF SCIENCE & TECHNOLOGY

Sylhet, Bangladesh

Supervisor: **Dr. Sadia Sultana**

- Annotated facial expression images via OpenCV and preprocessed images to ensure data uniformity of the dataset.
- Evaluated and analyzed the performance of existing state-of-the-art CNN models on the dataset.

Undergraduate Thesis

Jan 2022 - Mar 23

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, SHAHJALAL UNIVERSITY OF SCIENCE & TECHNOLOGY

Sylhet, Bangladesh

Title: **Development of an Ensemble Learning system for Facial Expression Recognition Utilizing Deep Convolution Neural Networks with Transfer Learning**

- Conducted literature reviews to assist in shaping the overall design of the research.
- Developed and trained an efficient Facial Expression Recognition system utilizing Deep Convolution Neural Networks in an Ensemble with Transfer Learning, achieving 97.32% accuracy.
- Incorporated Transfer Learning and Data Augmentation to address the overfitting issue.

Collaborative Research

Ongoing

SHAHJALAL UNIVERSITY OF SCIENCE & TECHNOLOGY | THE UNIVERSITY OF TEXAS AT EL PASO

Sylhet, Bangladesh | Texas, USA

Supervisor: **Prof. Moqsadur Rahman**

- Collected a bulk amount of depression-related data (1M posts) crawling from Reddit.
- Utilized NLTK for text processing and custom functions for text cleaning.
- Preprocessed the data in a time-based approach: Incremental Window and Sliding Window.
- Used pretrained word embeddings like Skip-gram and GloVe for analyzing trends related to depression involves leveraging the semantic relationships encoded in word vectors.
- Monitored the changes in word embeddings using temporal data.

Publications

- Sadia Sultana, Saiful Sagor, **Golam Jilani**, Al Masum, and Samara Paul
“SUFEDB: A facial expression database for emotion recognition” (under review in one of the IEEE Transactions journals)
- **Golam Jilani**, Samara Paul, and Sadia Sultana
“Leveraging Deep Convolutional Neural Networks in Ensemble with Transfer Learning and Data Augmentation for Facial Expression Recognition” (manuscript under preparation)

Skills

Languages: Python, C, Java, JavaScript

Databases: MySQL, SQLite, MongoDB

Frameworks: PyTorch, Keras, Numpy, Pandas, scikit-learn, OpenCV, NLTK

Test Scores

IELTS: 7.5 (L-8.5, R-8.5, W-6.5, S-7)

Licenses & Certifications

- 2022 **Neural Networks and Deep Learning**, course offered by Coursera.
- 2022 **AWS Cloud Foundations**, course offered by AWS.
- 2020 **Python Data Structures**, course offered by Coursera.
- 2020 **Using Python to Access Web Data**, course offered by Coursera.

Projects

La-Tienda: A web based E-commerce Application

Oct 2021 - Oct 2022

ACADEMIC PROJECT

- Created a comprehensive e-commerce platform using MERN stack (MongoDB, Express.js, React.js, and Node.js).
- Developed and integrated three APIs (E-commerce, Bank, and Seller) to improve user functionality and overall experience.

A web application for creating Result Processing System (RPS)

Oct 2021 - Dec 2021

ACADEMIC PROJECT

- Created and implemented various models to establish and maintain interrelationships among models on the backend using Django.
- Developed and deployed a resilient database using SQLite, guaranteeing accuracy and ease of access to the data.

Relevant Courses

CS and ML Courses:

Machine Learning, Artificial Intelligence, Digital Signal Processing, Data Science, Data Structures and Algorithms, Computer Architecture, Computer Networks, Operating System, Cloud Computing, and Discrete Mathematics

Math Courses:

Linear Algebra, Calculus, Complex Analysis, Statistics & Probability, Complex Variables, Laplace Transforms, and Fourier Series

Extracurricular Activities

2018-2022 **Member**, CSE Society (SUST)

Sylhet, Bangladesh

2021 **Participated in First Aid Training Program**, Jafrabad Medical Camp, Global Relief Trust (GRT)

Sylhet, Bangladesh

References

Dr. Sadia Sultana

Associate Professor

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Shahjalal University of Science and Technology
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Prof. Maruf Ahmed Mridul

Assistant Professor

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