

# Shadika Afroze

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## EDUCATION

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**Chittagong University of Engineering and Technology (CUET)**

*B.Sc. in Computer Science & Engineering (CSE)*

**CGPA** : 3.76 / 4.00 (with Honors) | Last 2 year: 3.92/4

Chattogram, Bangladesh

*Jan. 2018 - July 2023*

Rank: 11th / 126

## EXPERIENCE

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**Lecturer | Dept. of Computer Science & Engineering**

*East Delta University*

Sep. 2023 – Present

*Chattogram, Bangladesh*

Key Qualifications and Responsibilities:

- Created and maintained a welcoming, friendly, and engaging classroom environment where all students felt comfortable
- Developed rigorous lesson plans and graded papers, quizzes, tests, and other assignments
- Served as an academic advisor of 70 students
- Served as co-advisor of EDU Computer Club

**Courses Taken:** Data Structure, Data Structure Laboratory, Computer Fundamentals and Programming Basics, Computer Fundamentals and Programming Basics Laboratory, Differential Calculus, Coordinate Geometry & Complex Variables

**Software Development Intern**

*BJIT*

Oct 2022 - Nov 2022

*Dhaka, Bangladesh*

- Developed a Budget Management System using Node.js, MongoDB, and Bootstrap which facilitates budget creation, expense tracking, and financial analysis with Visualization.
- Explored different project management tools used in real-world industry setting

## RESEARCH INTEREST

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Natural language processing (NLP), Computer Vision, Multimodal information processing, Vision Language Navigation, and Human-robot interaction.

## RESEARCH EXPERIENCE

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**Undergraduate Thesis**

Conducted research titled "A Transformer-based Model for Image Caption Generation with Memory Enhancement". This study aims to generate descriptive sentences to accurately represent the content of an image. This work utilized a Vision Transformer as the primary encoder, replacing the traditional CNN, and integrated a Meshed Memory Transformer for Caption generation. This research is conducted under the supervision of Professor Dr. Asaduzzaman.

**Workshop Paper**

Afroze, S., Hosna, A., Chowdhury, A., (Dec-2020). "Multilingual Cyber-bullying and Hate Speech Detection System Using Transformers", published at 1st national workshop on Big Data and Machine Learning (BDML 2020) page - 108. [Certification](#)

## PROJECTS

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### VisioQuest: AI-Image-Inquiry

Sep 2023 – Jan 2024

- An advanced Visual Question Answering (VQA) project leveraging Vision Transformers (ViT) and RoBERTa for accurate image question answering. This work Utilized the DAQUAR dataset. Users can upload their own images and pose questions to receive relevant answers. This project is deployed on [\[Hugging Face\]](#) and the code is available on [\[GitHub\]](#).

### Text-Auto-Completion

June 2022 – Oct 2022

- Developed a web application using Streamlit for text auto-completion by utilizing an LSTM neural network model. The app predicts the next possible words based on user input. The project involved loading and processing large datasets, building and training the LSTM model, and deploying the model in a user-friendly web interface. It is deployed on [\[Hugging Face\]](#) and the code is available on [\[GitHub\]](#).

### Image Caption Generator

Jan 2022 – May 2022

- Developed a deep learning model that can generate accurate captions for images. This work used CNN model (Xception) for extracting visual features from images and RNN model for predicting sentences. The Flickr8k dataset was used in this project. [\[GitHub\]](#).

### Hey-Chittagong

March 2020 – June 2020

- Developed a dynamic responsive website that can be used to explore Chittagong city. It provides all the information about the tourist places of this city, hotels, restaurants, banks, and hospitals with an exciting blogging section. Technologies used: Vanilla js, express, node js, Handlebars, bootstrap, MongoDB. [\[GitHub\]](#).

## TECHNICAL SKILLS

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**Programming Languages:** Python, C, C++, JAVA

**Web Development:** HTML, JavaScript, CSS, jQuery, PHP, NodeJs, Django.

**Database Management System:** MySQL, MongoDB

**Machine Learning Libraries:** NumPy, Pandas, SciKit-Learn, spaCy, Keras, TensorFlow, PyTorch

**IDE Experiences:** Google Colaboratory, PyCharm, Code Blocks, Android Studio, Eclipse, Visual Studio Code, Notepad++, LaTeX

## AWARDS & EXTRA CURRICULAR ACTIVITIES

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- Nominated for DEAN'S Award (CGPA 3.75+)
- Attended workshop on IoT-Based Smart Campus [\[Certificate\]](#)
- Banglalink Womentor Program for Women in Tech, Bangladesh (Virtual, 2021)
- A volunteer member of the CUET Computer Club
- Was Debate Team Vice President in college

## LINGUISTIC PROFICIENCY

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- English (Fluent Working Proficiency) TOEFL Score: 101
- Bangla (Native Language)

## REFERENCES

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- Available on request