

Education

Doctor of Philosophy (Ph.D)

Computer Science and Engineering (Current CGPA 4.00/4.00)

University of California, Riverside

September 2022 – Present

Research Topics: Multimodal Machine Learning and Computer Vision

Bachelor of Science (with Honors)

Computer Science and Engineering (CGPA 3.94/4.00)

Bangladesh University of Engineering & Technology (BUET)

February 2015 - April 2019

Major: Artificial Intelligence and Machine Learning | **Research Topic:** Automatic Text Summarization

Research Interests and Publications

Research Interests

My research interests include but not limited to

- Multimodal Machine Learning, Computer Vision, Natural Language Processing
- Multimodal data fusion which is robust to missing modalities
- Extract useful information from noisy/low resolution data

Robust Multimodal Learning with Missing Modalities via Parameter-Efficient Adaptation *Under Review*

Proposed a parameter efficient approach to adapt multimodal models to different missing modality scenarios

- **Submitted to:** ICLR 2024
- **Supervisor:** Dr. M. Salman Asif

Multimodal Transformer for Material Segmentation

Under Review

Proposed a novel fusion strategy and segmentation model for multimodal material segmentation

- **Submitted to:** OJSP - ICASSP 2024
- **Supervisor:** Dr. M. Salman Asif

Automatic Summarization of Scientific Articles from Biomedical Domain

IJCCI 2019

Proposed a new algorithm named WordRank for generating summaries automatically from scientific articles

- **Published in:** International Joint Conference on Computational Intelligence
- **Supervisor:** Dr. M. Sohel Rahman

Work Experience

Teaching Assistant

University of California, Riverside

September 2023 – Present

California, USA

Course: CS 171/EE 142: Introduction to Machine Learning and Data Mining

Graduate Student Researcher

University of California, Riverside

September 2022 – Present

California, USA

Research Topics: Multimodal Machine Learning and Computer Vision | **Supervisor:** Dr. M. Salman Asif

Senior Engineer, Software Research & Engineering

bKash Limited (Leading FinTech Company in Bangladesh)

July 2019 – August 2022

Dhaka, Bangladesh

- I worked in the **bKash Merchant App**, **bKash Customer App** and **bKash Payment Gateway** team.
- My primary responsibilities were to develop and implement new user-centric features and improvements, optimize performance, and ensure code adheres to best practices, design patterns, and guidelines through unit tests, refactoring, and bug fixes for an enhanced user experience.

Software Engineer, Mobile Application Group

Samsung Research & Development Institute, Bangladesh

May 2019 – July 2019

Dhaka, Bangladesh

- I joined Samsung as a mobile application developer and worked in Mobile Application Group - 1.
- My primary responsibilities were to develop mobile applications, ensure code quality and fix critical bugs.

Projects

Dyne: Meet Your Friends Over Food (Social Media App)	Flutter, Firebase, NodeJs, Geolocation Details
Social app for instant food meetups, exploring restaurants, chatting, coupons, fostering connections, & savings.	
Dorao: Your Running Companion (Fitness Tracker App)	Flutter, Firebase, Django, Geolocation Details
Track walks/runs, stay motivated with daily challenges, log time & distance, track stats, stay fit, and save money.	
Procurement Institute (Gazetted Tender Management App)	Flutter, Firebase, RevenueCat Details
One-stop solution for gazetted tenders, making it easy and reliable to find and learn about preferred tenders.	
Payvor: Pay & Get Paid for a Favor (Freelance Jobs App)	Flutter, Firebase, C# .NET Details
Instantly connect with diverse people for any task, matching you within minutes – your reliable invisible friend.	
Kalimera (Tourist Guide App)	Flutter, Firebase, Geolocation Details
From popular spots to hidden gems, ensuring the best experiences & creating cherished memories in Greece.	
Pessa: Real-Time Financial Transaction (FinTech App)	Flutter, Firebase, C# .NET Details
All-in-one mobile wallet for seamless money management. Add money, send funds instantly, cash out, & more.	
Cherished Prayers (Social Media App for the Pious)	Flutter, Firebase, Django Details
Record, share, seek solutions, connect with others via chat, groups, and feedback for an enriched experience.	
Language generation using RNNLM (NLP Project)	Deep Learning, Keras Github
Used Quora question pair dataset to generate sentences for gap filling & template-based sentence generation.	
Automated Lawn Mower (Hardware Project)	Computer Vision, Raspberry Pi Youtube
Automated device using computer vision, camera, sonar sensors to detect and cut grass, avoiding obstacles.	
Weather Station (Hardware Project)	Microcontroller Youtube
A compact device that monitors current weather, stores data, conducts analysis and predicts future weather.	

Technical skills

Programming Languages	Python, Dart, Java, C/C++
Library/Frameworks	PyTorch, TensorFlow, Huggingface, Sk-learn, OpenCV, NumPy, Pandas, Matplotlib, Flutter, Django
Database	MySQL, PostgreSQL, HBase, Firebase Firestore, Firebase Realtime DB
Software/Technologies	Anaconda, PyCharm, Android Studio, VSCode, Firebase, RestAPI, GraphQL, FastAPI, Git

Leadership

Vice President	Greater Rangpur Students' Welfare Association, BUET	Aug 2018 – May 2019
Class Representative	Department of Computer Science & Engineering, BUET	April 2016 - April 2019

Awards

Dean's Distinguished Fellowship	University of California, Riverside	Fall'22 - Spring'23
Department Dean's List Award	Bangladesh University of Eng. & Tech. (BUET)	2015 - 2019
University Merit Scholarship	Bangladesh University of Eng. & Tech. (BUET)	2015 - 2019
MetLife Pathways Scholarship	MetLife Foundation	2015 - 2018
Education Board Scholarship	Bangladesh Education Board	2012 - 2019