Maksuda Rahman
Dhaka,Bangladesh
[Portfolio]

Email: fariyamaksudarahman@gmail.com
Phone:+880-1715-233008
LinkedIn‖ Github‖Google Scholar

RESEARCH INTERESTS

☐ Artificial intelligence ☐ Deep Learning ☐ Natural Language Processing
☐ Computer Vision ☐ Robotics ☐ Signal Processing

EDUCATION

- **Khulna University of Engineering & Technology, BD** January 2018 - February 2023
  Bachelor of Science in Electronics and Communication Engineering *CGPA: 3.35/4.00*

RESEARCH EXPERIENCES

- **Ensemble of boosting algorithms for Parkinson disease diagnosis** *2021-2022*
  M. Rahman, M.K. Hasan, M. M. Madhurja, and M. Ahmad, "Ensemble of boosting algorithms for Parkinson disease diagnosis", in Proceedings of the International Conference on Information and Communication Technology for Development: ICICTD 2022, Springer, 2023, pp. 343–354. ↗

- **Undergrade Thesis** *2022-2023*
  Title: ***Deep Learning Approach for Semantic Segmentation of Remote-Sensing Image*** Under the supervision of Dr. Md. Faruque Hossain

  Outline: The thesis aimed to develop a deep learning model for segmenting remote sensing images. The research focused on analyzing the challenges in geospatial image segmentation for both single-class and multi-class scenarios, evaluating existing solutions, and addressing their limitations. The objective was to design a robust model applicable to both segmentation types and compare its performance in terms of loss, accuracy, and learning rate. A tri-UNet architecture was implemented, leveraging ResNet50 and VGG19 as backbones to enhance the model's capability and reliability.

TECHNICAL SKILLS

- **Languages**: Python, C/C++, JavaScript, SQL, HTML/CSS
- **Frameworks**: Scikit-learn, NLTK, SpaCy, TensorFlow, Keras,Py Torch,OpenCV,Media Pipe Matplotlib, Seaborn,Pandas
- **Tools**: Cisco Packet Tracer, Git, Oracle VM VirtualBox, MATLAB, Jupyter Notebook, VSCode
- **Platforms**: Linux, Windows, Arduino, Google Colab
- **Soft Skills**: Leadership, Event Management, Writing, Public Speaking, Time Management

PROJECTS

- **Virtual Painting App** ↗: *May 2021- June 2021*
  – Allow users to paint in real-time using hand motions by the webcam, and allow them to select from a range of colors for their virtual paintings.
  – Allow users to customize features such as color palettes, brush sizes, and gesture sensitivity to meet their preferences, and confirm that the app regulates user data securely and preserves user privacy, particularly when using the webcam or storing files.

- **Fraud Transaction Detection System** ↗: *May 2021- June 2021*
  – Detect fraudulent activity with high accuracy to limit false positives and false negatives, and implement an ensemble model to predict fraudulent transactions or behavior from the dataset.

- **Gesture Volume Control** ↗: *July 2024 - August 2024*
  – Control a computer's volume using hand gestures, which involves detecting hand landmarks via a webcam.
  – The distance between the thumb and index fingertips is measured and mapped to corresponding volume levels for adjustment.

- **SerpentSaga** ↗: *November 2021- December 2021*
  – Designed game mechanics, including collision detection, and dynamic score tracking.
  – Optimized event handling and input response to ensure a seamless and engaging user experience.

- **Face Detection and Recognition** ↗: *October 2025-October 2021*
  – SVC has been used to detect face or not from input and trained with Labelled Faces in the Wild dataset.
  – Linear SVM has used to Face Recognition.

EXPERIENCE

Machine Learning Intern   *Remote*
DevIncept   *July 2021 - August 2021*

- Applied ML techniques to real-world projects, enhancing problem-solving and analytical skills.
- Developed a flexible and adaptive professional profile, prepared to handle complex technical and collaborative challenges.

OpenCV Trainee   *Remote*
DevIncept   *May 2021 - June 2021*

- Proficient in Python with foundational knowledge of computer vision concepts and techniques and Completed assignments on motion analysis, object tracking, and image segmentation using tools such as OpenCV, NumPy, and scikit-image.
- Built a strong understanding of image preprocessing, feature extraction, and algorithm implementation, fostering the ability to tackle complex vision-based challenges.

Data Science Intern   *Remote*
The Sparks Foundation   *April 2021 - May 2021*

- Mastered Python, data science, and prepared to tackle complex technical challenges in dynamic environments.
- Developed strong communication skills through effective presentation of technical projects and enhanced teamwork and project management abilities,

STANDARDIZED TEST SCORES

- Graduate Record Examinations (GRE) 🔗

Total	Quantitative Reasoning	Verbal Reasoning	Analytical Writing
311/340	164/170	147/170	3/6.0

RELEVENT COURSES

- Computer Fundamentals and Programming
- Data Structures and Algorithms
- Solid State Electronics
- Database System
- Numerical Analysis
- Computer Networks
- Digital Image Processing
- Machine Learning
- Wireless Communications
- Information Theory
- Digital Signal Processing
- Digital Communication

HONORS/AWARDS

☐ **Recipient, Scholarship of Merit**   *2010-2017*
   Given by the Secondary,and Primary Education Board, Bangladesh. Monthly Government Scholarships were received for outstanding results in Primary School Certificate (PSC) examination–2009, Junior School Certificate(JSC) examination-2013, Secondary School Certificate (SSC) examination- 2015.

☐ **Vocational Scholarship**   *2018-2022*
   Awarded for maintaining strong academic performance throughout undergraduate studies.

☐ **Second Best Paper Award-ICICTD,Springer Bangladesh section**   *2022*
   Recognized for outstanding research contribution.

EXTRACURRICULAR ACTIVITIES

Public Relationship Officer   *Khulna, Bangladesh*
KUET Adventure Club   *Oct 2021 - Feb 2023*

- Arranged different traveling seminars and planned different tours for the students.

Event Organizer   *Khulna, Bangladesh*
Technival   *Feb 2018 - March 2018*

- Organized events and workshops hosted by the Department of Electronics and Communication Engineering, coordinating logistics and participant engagement.