

# Md. Zahidul Islam

Lecturer, Dept. of Computer Science & Engineering, Islamic University of Technology

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## Education

### Islamic University of Technology (IUT)

📍 Dhaka, Bangladesh

📅 Jan 2017 – March 2021

#### B.Sc. in Computer Science and Engineering (CSE)

- CGPA – 3.99/4.00, Ranked 1<sup>st</sup> in class of 86
- Thesis Supervisor - Dr. Md. Hasanul Kabir
- Thesis Title – Efficient Two-Stream Network for Violence Detection Using Separable Convolutional LSTM

## Professional Experience

### Islamic University of Technology

📍 Dhaka, Bangladesh

📅 July 2021 – Present

#### Lecturer, Dept. of Computer Science and Engineering

- Courses Conducted - Computing for Engineers, Data Structures Lab, Microprocessor Lab
- IUT Computer Vision Lab - Researching on the area of Computer Vision & its real-world applications.

### Apurba Technologies Ltd.

📍 Dhaka, Bangladesh

📅 March 2021 – June 2021

#### Machine Learning Engineer

- Research and development of large-scale Bengali Optical Character Recognition (OCR) pipelines.
- Developed and optimized deep learning models for grapheme-based bengali character recognition.
- Implemented image processing & deep learning methods for word detection & character segmentation.

### Samsung R & D Institute Bangladesh

📍 Dhaka, Bangladesh

📅 Nov 2019 – Jan 2020

#### Intern, Research & Mobile Application Development

- Developed user identification system by recognizing human walking patterns using deep learning models on smartphone accelerometer data.

## Research Experience

[ORCID](#)

### Publication

- (1) Z. Islam, M. Rukonuzzaman, R. Ahmed, M. H. Kabir and M. Farazi, "Efficient Two-Stream Network for Violence Detection Using Separable Convolutional LSTM", 2021 International Joint Conference on Neural Networks (IJCNN), 2021, pp. 1-8, [paper](#)

### Field of Interest

- My research interests include Computer Vision, Machine Learning and their real-world applications.
- Specifically, I am interested in human behavior analysis, activity recognition, scene understanding.

### Reviewing Experience

- Reviewed an article for the journal IEEE Access (x2) June 2021
- Reviewed an article for the journal Applied Artificial Intelligence (AAAI) Aug 2021

## Skills

- Programming - Python, C++, C, Java
- Web - HTML, CSS, JS
- Image Processing - OpenCV, Matlab
- Proficient in Tensorflow, Pytorch & Sklearn for Machine Learning/Deep Learning research & applications

### Inpainter

*Python, PyQt, OpenCV*

- A GUI application that helps fill up missing/damaged areas or remove foreground objects from images.

### Traffic Sign Localization and Recognition

*Python, Tensorflow*

- A two stage system where at first, region of interests likely to contain traffic signs are found out using *Voila-Jones* object detection algorithm. Then, a deep neural network recognizes the traffic signs.

### EasyScan OCR Whiteboard

*Python, OpenCV, Tesseract*

- A interactive GUI digital whiteboard with live handwriting recognition (OCR). This feature allows saving whiteboard sessions as texts and helps improve the understandability of the handwriting.

### Tsaurus

*Node JS, Python, OpenCV*

- Helps children learn new words in a fun way by simply taking photo of text. The software fetches relevant images, dictionary meaning etc. from internet. It uses OCR and webscrapping tools.

### Inverse Kinematics

*Python, Sympy, Matplotlib*

- Automates movement of a robotic arm with 6 degrees of freedom & visualizes it using an easy to use GUI.

## Awards & Accolades

### European Rover Challenge, Poland

2019, 2018

- Achieved 15th position in ERC 2019 and 14th position in ERC 2018 with IUT Mars Rover-Team Avijatrik. Worked on robotic arm manipulation and cache retrieval by image processing.

### Matlab Coding Challenge

2020, 2019

- Champion in Matlab Mania at *Horizon 2020*, KUET and in Matlab Challenge at *Esonance 2019*, IUT.

### ICT Olympiad

2019

- Champion in ICT Olympiad at IUT 10th ICT Fest organized by dept. of CSE, IUT.

### Line Following Robot Racing

2018

- Runners up in LFR Racing at *Technovision* organized by ECE dept., North South University.

### Scholarships

2016, 2014

- Full free Scholarship for 3 years of undergrad study at IUT by Organization of Islamic Cooperation (OIC).
- Higher Secondary Certificate and Secondary School Certificate exam scholarships by Bangladesh Govt.

## Online Certifications

[Verify](#)

- Deep Learning Specialization, Tensorflow Developer Specialization, by *DeepLearning.AI* - Coursera

## Standardized Test Scores

- **GRE** : Quantitative - **167/170**, Verbal - **161/170**, Analytical Writing - **4.0/6.0** Oct 2021
- **TOEFL** : Total - **110/120**, Reading - 29, Listening - 30, Speaking - 23, Writing - 28 Sept 2021

## Reference

### Dr. Md. Hasanul Kabir

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### Abu Raihan Mostofa Kamal

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