# Md. Zahidul Islam

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

✉ zahidulislam@iut-dhaka.edu　　🔗 https://zahid58.github.io/　　📍 IUT, Dhaka, Bangladesh
📞 +8801753638013　　🐙 github.com/zahid58　　in linkedin.com/in/zahid58

## 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 $1^{st}$ in class of 86*
- **Thesis** – *"Efficient Two-Stream Network for Violence Detection Using Separable Convolutional LSTM"*
  ⇒ Proposed a light-weight yet effective CNN-LSTM network for violence detection from surveillance footage which achieves state-of-the-art results on three standard datasets **(Published in IJCNN 2021)**.
  ⇒ **Supervisor** — Dr. Md. Hasanul Kabir, Professor, IUT

**Cumilla Cadet College**　　📍 *Cumilla, Bangladesh*　　📅 *2010 – 2016*

- Higher Secondary Certificate (HSC), 2016 – GPA: **5.00**/5.00, *Ranked $3^{rd}$ in Cumilla Education Board*
- Secondary School Certificate (SSC), 2014 — GPA: **5.00**/5.00, *Ranked $1^{st}$ in Cumilla Education Board*

## 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]

**Publications**

(1) **Zahidul Islam**, Mohammad Rukonuzzaman, Raiyan Ahmed, Md. Hasanul Kabir, Moshiur Farazi, *"Efficient Two-Stream Network for Violence Detection Using Separable Convolutional LSTM"*, *Presented in International Joint Conference on Neural Networks **(IJCNN)**, 2021 [In Press]* Paper

**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*

**Field of Interest**

- My research interests include **Computer Vision, Machine Learning** and their **real-world applications**.
- I am also interested in problems that incorporate Computer Vision and Natural Language Processing.

## Skills & Certifications

### 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

### Online Courses

- Deep Learning Specialization, *DeepLearning.AI, Coursera,* [Verify]                              *Feb 2020*
- TensorFlow Developer, *DeepLearning.AI, Coursera,* [Verify]                                     *April 2020*
- Machine Learning, *Standford University, Coursera,* [Verify]                                       *Aug 2019*

## Projects                                                                        [www.github.com/zahid58]

### 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 (best among Asian teams) in ERC 2018 with Team IUT Mars Rover. 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.

## Reference

**Dr. Md. Hasanul Kabir**

Professor,
Dept. of Computer Science and Engineering,
Islamic University of Technology (IUT),
✉ hasanul@iut-dhaka.edu, ☎ +8801715007049

**Abu Raihan Mostofa Kamal**

Professor and Head of the Dept.,
Dept. of Computer Science and Engineering,
Islamic University of Technology (IUT),
✉ raihan.kamal@iut-dhaka.edu, ☎ +8801843925543