THAMIDUL ISLAM TONMOY

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Career Objective

To work as a researcher in healthcare engineering industry with a vision to improve computer aided diagnosis and help patients around the world to live a better life.

Research Interest

- ❖ Machine Learning
- ❖ Computer Vision
- ❖ Biomedical Image Processing
- ❖ Biomedical Signal Processing

Research Experience

DSP Research Lab BUET

3. Image Processing with Convolutional Neural Network (on going)
In this research, we are trying to remove noise/artifacts introduced by adverse environmental condition during capturing image using convolutional neural network.

2. Traffic Sign Detection and Recognition
Worked on the winning model of IEEE VIP Cup 2017 to enhance the robustness of the detection system which uses state of the art neural networks to tackle the challenge.

1. Breast Cancer Classification from Histopathological Image
In this undergrad thesis research, we explored the power of deep neural networks in two different domains (image and DCT) to classify breast histopathological images.

Publications

1. U. Kamal, **T. I. Tonmoy**, S. Das, and M. K. Hasan, "*Automatic Traffic Sign Detection and Recognition Using SegU-Net and a Modified Tversky Loss Function with L1-Constraint*", Submitted in IEEE Trans. Intell. Transp. Syst., July 2018.

Skills

Deep Learning	Keras, TensorFlow, NVIDIA DIGITS, Caffe
Programming	Python, MATLAB, C, C++, Assembly, PLC
OS	Windows, Ubuntu
MS Office	Word, PowerPoint, Excel
Graphics Editor	Adobe Illustrator
Language	Bangla (native), English (fluent)

Education

Bachelor of Science in Electrical & Electronic Engineering, September 2017
Bangladesh University of Engineering & Technology (BUET), Dhaka, Bangladesh
Major: Communication,   Minor: Electronics
CGPA: 3.57 on a scale of 4.00

Higher Secondary Certificate, 2012
Notre Dame College, Dhaka, Bangladesh
Group: Science
GPA: 5.00 on a scale of 5.00

Secondary School Certificate, 2010
Motijheel Model High School & College, Dhaka, Bangladesh
Group: Science
GPA: 5.00 on a scale of 5.00

Highlighted Undergraduate Courses

- Electrical Circuits
- Electronic Circuits
- Computer Programming
- Numerical Technique
- Control System
- Continuous Signals & Linear Systems
- Random Signals & Processes
- Digital Signal Processing I
- Digital Signal Processing II
- VLSI I
- VLSI II
- Biomedical Instrumentation

Online Courses Audited

Stanford University
- Convolutional Neural Networks for Visual Recognition

Coursera
- Machine Learning

deeplearning.ai
- Neural Networks and Deep Learning
- Improving Deep Neural Networks
- Structuring Machine Learning Projects
- Convolutional Neural Networks

Highlighted Undergraduate Projects

June 2017
Low-Cost Implementation of Whole Slide Image (WSI) Scanner
Under *Biomedical Instrumentation Laboratory* project, B.Sc., BUET

December 2016
8×8 Booth Multiplier with Kogge-Stone Adder
Under *VLSI I Laboratory* project, B.Sc., BUET

Self-Stabilizing Platform
Under *Control System Laboratory* project, B.Sc., BUET

June 2016
Automatic Railway Track Security System
Under *Communication Laboratory* project, B.Sc., BUET

CNC Plotter
Under *Microprocessor and Interfacing Laboratory* project, B.Sc., BUET

December 2015
Automatic Water Supply System
Under *Digital Electronics Laboratory* project, B.Sc., BUET

Awards & Scholarships

- ❖ Dean's List Award in Undergraduate level 2 in BUET
- ❖ Secondary School Certificate Board Scholarship
- ❖ Primary School Board Scholarship

References

1. Dr. Md. Kamrul Hasan
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2. Dr. Md. Shah Alam
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