Ahmed Tahseen Minhaz

Dhaka, Bangladesh
tahseenminhaz92@gmail.com,tahseenb.github.io
(+880)17 2344 2300

Research Interests Machine Learning, Computer Vision, Medical Imaging, Digital Signal Processing

Education

Bangladesh University of Engineering and Technology

- M.Sc., Electrical and Electronic Engineering, Apr '16- Present
  Cumulative GPA: 3.67/4.00

- B.Sc., Electrical and Electronic Engineering , Feb '11- Mar '16
  Cumulative GPA: 3.63/4.00

  Thesis Title: Apnea frame classification using spectral power ratios of EEG signals in patients affected with Sleep Apnea Syndrome.

Work Experience

Computer Vision Researcher, Semion Inc. Nov '16- Present

1. Abnormality Detection and Localization in Chest X-Rays using Deep Convolutional Neural Networks
2. Lung and Heart segmentation in Chest X-Rays via Non-rigid Image Registration using SIFTFlow algorithm and Deep Residual Refinement Network
3. Co-development of SemRad, a deep neural network based Xray abnormality screening tool

EUProW Lab, BUET

1. Apnea frame classification from EEG signal in patients with sleep apnea syndrome
2. Enhancement of Noisy Speech Based on Decision-directed Wiener Approach in Perceptual Wavelet Packet Domain
3. Subject dependent study of audio-visual emotion recognition

Journals

1. "Abnormality Detection and Localization in Chest X-Rays using Deep Convolutional Neural Networks" M. T. Islam, M. A. Aowal, A.T. Minhaz, K. Ashraf; Arxiv, 2017

Proceedings

1. "Sub-Frame based Apnea Detection Exploiting Delta Band Power Ratio Extracted From EEG Signals" Celia Shahnaz, A. T. Minhaz, S. T. Ahamed; IEEE Region 10 Conference (TENCON), 2016, Singapore.
2. "Apnea Frame Detection by Empirical Mode Decomposition of Wavelet based Reconstructed Delta Wave of EEG Signals" A. T. Minhaz, C. Shahnaz; IEEE WIECON-ECE 2016, India.

3. "Enhancement of Noisy Speech Based on Decision-directed Wiener Approach in Perceptual Wavelet Packet Domain" M. T. Islam, M. N. Shaan, E. J. Easha, A. T. Minhaz, C. Shahnaz, S. A. Fattah; IEEE Region 10 Conference (TENCON), 2017, Malaysia.(accepted)

Skills

- *Languages:* Bengali, English, Hindi, Urdu
- *Programming Languages:* Python, MATLAB, C, C++, Assembly, LaTeX
- *Software:* MATLAB, Proteus, Quartus, PSpice
- *Hardware:* Arduino, Raspberry Pi, AVR Microcontrollers

Relevant Courses

Undergrad Level: Linear Algebra, Probability and Statistics, Digital Signal Processing I, Random Signals and Processes, Digital Signal Processing II

Grad Level: Digital Speech Processing, Biomedical Signal Processing

Self-taught: Machine Learning(Coursera), Convolutional Neural Networks for Visual Recognitions(Stanford)

Standardized Tests Scores

GRE: 332 out of 340
Q-170 (97^{th} percentile), V-162 (91^{st} percentile), AWA-4 (60^{th} percentile)

TOEFL: 109 out of 120
Reading-30, Listening-29, Speaking-26, Writing-24)

Honors and Awards

1. Dean's List Award, BUET (2012-2013)
2. Bangladesh Govt. Scholarship in Higher Secondary Level (11^{th})
3. Bangladesh Govt. Scholarship in Secondary Level (21^{st})

Referees

Celia Shahnaz, Ph.D.(Concordia University,Canada)
Professor, Department of EEE
Bangladesh University of Engineering and Technology(BUET)
celiashahnaz@gmail.com

Khalid Ashraf, Ph.D.(University of California, Berkeley)
Founder, Semion Inc.
khalid@semion.ai