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Google Scholar: Md. Rezwanul Haque
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Md. Rezwanul Haque

Career Objective

Looking for a career to demonstrate the best of my professional ability, research thinking, and strategies to improve my knowledge as well as to contribute to the best of my potential in my institution.

Research Interests

Artificial Intelligence, Machine Learning, Deep Learning, Deep Reinforcement Learning, Image Processing, Computer Vision, Medical Image Analysis, Biomedical Signal Processing, Bioinformatics, Health Informatics, Data Mining, and Natural Language Processing.

Academic Credentials

2015 – 2019 **Bachelor of Science in Computer Science and Engineering**,
Khulna University of Engineering & Technology (KUET).
CGPA: 3.12/4.00

2012 – 2014 **Higher Secondary Certificate**,
Rajshahi Govt. City College, Rajshahi.
GPA: 5.00/5.00

2007 – 2012 **Secondary School Certificate**,
Balahar B.L. High School, Dinajpur.
GPA: 5.00/5.00

Research Works

Published Articles

○ Md. Milon Islam, **Md Rezwanul Haque**, Hasib Iqbal, Md. Munirul Hasan, Mahmudul Hasan, Muhammad Nomani Kabir, "Breast Cancer Prediction: A Comparative Study Using Machine Learning Techniques", ***SN Computer Science, Springer Nature***, vol. 1, no. 5, pp. 290, Sep. 2020. https://doi.org/10.1007/s42979-020-00305-w

○ **Md. Rezwanul Haque**, Md. Milon Islam, Kazi Saeed Alam, Hasib Iqbal, Md. Ebrahim Shaik, "A Computer Vision based Lane Detection Approach", ***International Journal of Image, Graphics and Signal Processing(IJIGSP)***, Vol.11, No.3, pp. 27-34, 2019. DOI: 10.5815/ijigsp.2019.03.04

Conference Papers

○ Shah Muhammad Amzat Ullah, Md. Milon Islam, Saifuddin Mahmud, Sheikh Nooruddin, S.M. Taslim Uddin Raju, **Md. Rezwanul Haque**, "Scalable Telehealth Services to Combat Novel Coronavirus (COVID-19) Pandemic", ***11th IEEE Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)***, 2020. [***Accepted***]

- **Md. Rezwanul Haque**, Md. Milon Islam, Hasib Iqbal, Md. Sumon Reza, Md. Kamrul Hasan, "Performance Evaluation of Random Forests and Artificial Neural Networks for the Classification of Liver Disorder", ***Proc. International Conference on Computer, Communication, Chemical, Material and Electronic Engineering (IC4ME2), IEEE***, Rajshahi, Bangladesh, pp. 1-5, 8-9 Feb., 2018.

- Md. Milon Islam, Hasib Iqbal, **Md. Rezwanul Haque**, Md. Kamrul Hasan, "Prediction of Breast Cancer Using Support Vector Machine and K-Nearest Neighbors", ***Proc. IEEE Region 10 Humanitarian Technology Conference (R10-HTC), IEEE***, Dhaka, Bangladesh, pp. 226-229, 21-23 Dec., 2017.

Under Review

- **Md. Rezwanul Haque**, S. M. Taslim Uddin Raju, Md. Asaf-uddowla Golap, M.M.A Hashem, "A Novel Technique for Non-Invasive Measurement of Human Blood Component Levels from Fingertip Video Using DNN Based Models", ***IEEE Access, IEEE.*** [Under 1st Review]. **[Impact Factor: 3.745, Q1]**

- Md. Asaf-uddowla Golap, S. M. Taslim Uddin Raju, **Md. Rezwanul Haque**, M.M.A Hashem, "Hemoglobin and Glucose Level Estimation from PPG Characteristics Features of Fingertip Video Using MGGP-Based Model", ***Journal of Biomedical Signal Processing and Control, Elsevier.*** [Under 1st Review]. **[Impact Factor: 3.830, Q1]**

- Amanullah Asraf, Md. Zabirul Islam, **Md. Rezwanul Haque**, Md. Milon Islam, "Deep Learning Applications to Combat Novel Coronavirus (COVID-19) Pandemic", ***Journal of Applied Computing and Informatics***, Emerald Publishing Limited. [Under 1st Review]. [**Scopus (SJR: 0.79, H Index: 17, Q1)**].

Undergraduate Thesis

- **Title:** "A Study on Non-Invasive Hemoglobin Measurement Techniques and Predictions"
  Supervisor: Prof. Dr. M.M.A Hashem, Dept. of Computer Science and Engineering, KUET
  Details: This research is based on a non-invasive way to measure the hemoglobin level. We took about 10 seconds video for each subject from body organs like an index finger by different Led-Board. We applied image processing techniques for features extraction. For best features selection, we used genetic algorithm. Finally, we applied different machine learning techniques on selected features to predict the hemoglobin level.

Relevant Online Courses

2020	**Intro to TensorFlow for Deep Learning**, *Udacity*.
	- Free Course
July 2020	**Deep Learning with Python and PyTorch**, *edx*.
	- Audit Access Course
June 2020	**What is Data Science?, offered by IBM**, *Coursera*.
	- Credential ID: LFXZEAY276QH
May 2018	**How to Win a Data Science Competition: Learn from Top Kagglers(With Honors), by National Research University Higher School of Economics**, *Coursera*.
	- Credential ID: 6EMSVQ6WVWR4
April 2018	**Introduction to Deep Learning, by National Research University Higher School of Economics**, *Coursera*.
	- Credential ID: QLWDW3HKJVZN
February 2018	**The Data Scientist's Toolbox, by Johns Hopkins University**, *Coursera*.
	- Credential ID: SLAZ5K264LC5

October 2017	**Neural Networks and Deep Learning, by deeplearning.ai**, *Coursera.*
	○ Credential ID: 9J7NCZTAE66G
November 2017	**Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, by deeplearning.ai**, *Coursera.*
	○ Credential ID: QFBKKNT4XFCY
January 2018	**Structuring Machine Learning Projects, by deeplearning.ai**, *Coursera.*
	○ Credential ID: YUC56KMA34EQ
February 2018	**Convolutional Neural Networks, by deeplearning.ai**, *Coursera.*
	○ Credential ID: FJKK2MVTPJ9E
February 2018	**Sequence Models, by deeplearning.ai**, *Coursera.*
	○ Credential ID: MTEC8WLQXZEZ
February 2018	**Deep Learning Specialization, by deeplearning.ai**, *Coursera.*
	○ Credential ID: NHNHYQ32CCGJ
August 2017	**Machine Learning A-Z^{TM}: Hands-On Python & R In Data Science**, *Udemy.*
	○ Course Link
April 2017	**Machine Learning, by Stanford University**, *Coursera.*
	○ Credential ID: U9PTRVDU3VRD

Technical Skills

Languages	Python, C, C++, Java, Swift, Matlab, R
Library	PyTorch, Tensorflow, Keras
WebD	HTML, CSS, SQL, PHP
Utilities	Git, LaTex, Anaconda, CISCO Packet Tracer
OS	Windows, Ubuntu, Kali-Linux, iMac

Academic Projects

April 2018	**Deep Neural Network for Image Classification Cat vs Non-Cat**, *Supervisor: Md. Milon Islam, Asst. Prof., CSE, KUET.*
	○ **Technology:** Deep Learning; Language: Python; IDE: Jupyter-notebook.
	○ **Details:** This project is on Cat Classification Project with Deep Neural Network.
April 2018	**Image Captioning Project**, *Supervisor: Md. Milon Islam, Asst. Prof., CSE, KUET.*
	○ **Technology:** CNN encoder with InceptionV3 model, RNN decoder with LSTM; Language: Python; Toolkits: Keras, TensorFlow; IDE: Jupyter-notebook.
	○ **Details:** In this project, I define and train an image-to-caption model that can produce descriptions for real-world images.
June 2018	**Road Surface and Lane Detection**, *Supervisor: Md. Milon Islam, Asst. Prof., CSE, KUET.*
	○ **Technology:** Image Processing, OpenCV; Language: Python; IDE: Jupyter-notebook.
	○ **Details:** This project is based on detection of road surface and lane lines of a road in images using Python and OpenCV. OpenCV, which is a package that has many useful tools for analyzing images.
September 2017	**Finding Lane Lines on the Road**, *Supervisor: Md. Milon Islam, Asst. Prof., CSE, KUET.*
	○ **Technology:** Image Processing, OpenCV; Language: Python; IDE: Jupyter-notebook.
	○ **Details:** This project is based on detection of lane lines of a road in images using Python and OpenCV.
October 2017	**Traffic Sign Classification**, *Supervisor: Md. Milon Islam, Asst. Prof., CSE, KUET.*
	○ **Technology:** Deep Learning, CNN; Toolkits: Keras, OpenCV; Language: Python; IDE: Jupyter-notebook.
	○ **Details:** Detecting and Classifying Traffic signs with CNN for German Traffic Dataset.
December 2017	**Reserva : A Seat Reservation Application for IOS platform**, *Supervisor: Sk. Imran Hossain, Asst. Prof., CSE, KUET.*
	○ **Technology:** Language: Swift; IDE: Xcode.
	○ **Details:** Public Transport Reservation System in IOS Platform.
December 2017	**Pothole Detection**, *Supervisor: Md. Milon Islam, Asst. Prof., CSE, KUET.*
	○ **Technology:** Image Processing, OpenCV; Language: Python; IDE: Jupyter-notebook.
	○ **Details:** It is based on Image Processing basic filtering. Some filter applied for detection pothole.

Scholarships

2015 – 2018 **Vocational Scholarship** from Khulna University of Engineering & Technology

Online Contest Programming and Activities

Codeforces.
- **Handle:** harry_potter_28 (Max Rate: 1389)
- Problems Solved: 350+

Stack Overflow.
- **Reputation:** 2600+

Data Analysis

Kaggle, *User Name: rezwan249*.
- LANL Earthquake Prediction (Max Pos: 710)
- Toxic Comment Classification Challenge (Max Pos: 1420)
- Bengali.AI Handwritten Grapheme Classification (Max Pos: 1941)
- 2019 Data Science Bowl (Max Pos: 2317)
- Final project: predict future sales (Max Pos: 260)
- RSNA-STR Pulmonary Embolism Detection (Max Pos: 610)

Experiences and Voluntary Work

2020 **Reviewer**, *Journal of Pharmaceutical Research International*.

2018 **Participant**, *2018 International Conference on Computer, Communication, Chemical, Material and Electronic Engineering (IC4ME2), Rajshahi University, Rajshahi, Bangladesh*.

2017 **Volunteer**, *University-Industry Collaboration: Challenges and Opportunities, KUET, Khulna, Bangladesh*.

2017 **Volunteer**, *3rd International Conference on Electrical Information and Communication Technology (EICT), KUET, Khulna, Bangladesh*.

2018 – 2019 **Instructor**, *Hardware Acceleration Club of KUET (HACK), KUET*.

2015 – 2019 **Instructor**, *Special Group Interested in Programming Contest (SGIPC), KUET*.

2015 – 2017 **Event Organizer**, *NHSPC (National High School Programming Contest)*.

2014 **Participant**, *Regional Mathematical Olympiad 2014, Rajshahi, Bangladesh*.

References

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