Mohammad Mahfujur Rahman

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**PERSONAL SUMMARY**

I am passionate about computer vision, deep learning, machine learning, robotics, and intelligent systems with a keen interest in visual recognition with limited or weakly labeled training data. I aim to utilize deep transfer learning and domain adaptation techniques to enable visual learning. I value good software engineering practices, teamwork, collaboration, and working with people I can learn from.

Deep neural networks, Generative adversarial networks, Image classification,

Image segmentation, Object detection, Domain adaptation,

Python, Pytorch, Tensorflow, Caffe, Thano, Keras,

OpenCV, Scikit-learn, Numpy, Pandas, Seaborn, C, C++, MATLAB

**EDUCATION**

**Ph.D. in Computer Vision 2016 – Present**

Queensland University of Technology (QUT), Brisbane, Australia.

**Thesis title:** Deep Domain Adaptation and Generalization

**Supervisors:** Professor Clinton Fookes and Professor Sridha Sridharan

**Achievement:** QUT Postgraduate Research Award (QUTPRA), QUT Higher Degree Research Tuition Fee Sponsorship .

**B.Sc. (Hons) in Electronics and Telecommunication Engineering (ETE) 2009 – 2013**

Daffodil International University (DIU), Dhaka, Bangladesh.

**Achievement**: Top CGPA in the faculty (CGPA: 3.98 out of 4.00), Gold medal in DIU convocation, Best paper award, ICRITO, IEEE, India.

**PROFESSIONAL EXPERIENCE**

**Ph.D. Researcher August** **2016 – Present**

Queensland University of Technology (QUT), Brisbane, Australia

* Researched deep domain adaptation and generalization in the context of image classification and segmentation
* Developed state-of-the-art multi-component image translation network for deep domain generalization
* Developed correlation-aware adversarial domain adaptation and generalization network for image classification
* Developed features regularization network for deep domain generalization
* Researched visual object segmentation, object classification with limited training data
* Improved deep learning methods for application to computer vision
* Awarded funding through the QUTPRA Scholarship Program
* Published and presented conference and journal papers

**Sessional Academic July 2017 – October 2017**

Queensland University of Technology (QUT), Brisbane, Australia

* Tutored foundations of electrical engineering course

**Lecturer May 2014 – August 2015**

Department of Electronics and Telecommunication Engineering

Faculty of Engineering, Daffodil International University, Bangladesh

* Tutored digital signal processing, computer network, electrical circuit courses
* Researched and developed new algorithms for image processing and machine learning
* Published and presented conference and journal papers
* Best paper awarded in ICRITO, IEEE, India.

**System Engineer May 2013 – May 2014**

IP Telephony, MetroNet Bangladesh Limited, Dhaka, Bangladesh

* Researched and developed IP telephony system
* Developed customized IP telephony software for the vast number of users

**SKILLS**

**Programming Languages**

Python, C, C++, Java, R, MATLAB

**Frameworks and Toolkits**

PyTorch, TensorFlow, Theano, Keras, Caffe, OpenCV, Scikit-image, Scikit-learn, Numpy, Pandas, Seaborn.

**Machine learning**

* Proficient in machine learning and deep learning skills for multiple applications including Computer vision, Recommendation systems and natural language processing.
* Convolutional neural network (CNN), deep neural network (DNN), adversarial learning, generative adversarial network (GAN), reinforcement learning, information and image retrieval, supervised and unsupervised machine learning, image classification, image segmentation, object detection, LSTM, Capsule network, SVM, PCA, LDA

**Misc.**

Academic research, teaching, training, consultation, LATEX type setting and publishing.

**PROFESSIONAL CERTIFICATION**

**Red Hat Certified System Administrator (RHCSA)**  October 2013

Certificate Number: 130-170-335

**Red Hat Certified Engineer (RHCE)**  October 2013

Certificate Number: 130-170-335

**AWARDS**

**Gold Medal**  2014

Daffodil International University (DIU) Convocation, Dhaka, Bangladesh**.**

**Best Paper Award**  2015

ICRITO, IEEE, India.

**QUTPRA Ph.D. Scholarship** 2016 - 2019

Queensland University of Technology, Brisbane, Australia.

**QUT Higher Degree Research Tuition Fee Sponsorship**  2016 - 2019

Queensland University of Technology, Brisbane, Australia.

**EXTRACURRICULAR ACTIVITIES**

**General Secretary**  2016 - 2017

QUTBA, Queensland University of Technology, Brisbane, Australia

**General Secretary** 2014 - 2015

DIU ETE Alumni Association, Dhaka, Bangladesh.

**President**  2012 - 2013

DIU Nature Study Club, Dhaka, Bangladesh.

**PUBLICATIONS**

(1) **M. M. Rahman**, M. Baktashmotlagh, C. Fookes, and S. Sridharan, Multi-component image translation for deep domain generalization, in IEEE Winter Conference on Applications of Computer Vision (WACV), 2019.

(2) **M. M. Rahman**, C. Fookes, M. Baktashmotlagh, and S. Sridharan, On minimum discrepancy estimation for deep domain adaptation, in International Conference on Machine Learning- workshop (ICML-W), 2018.

(3) **M. M. Rahman**, C. Fookes, M. Baktashmotlagh, and S. Sridhara, Correlation-aware adversarial domain adaptation and generalization, Pattern Recognition, 2019 (Under review).

(4) **M.M. Rahman**, C. Fookes, M. Baktashmotlagh, and S. Sridharan, Features regularization network for deep domain generalization, In International conference on computer vision (ICCV), 2019 (under review).

(5) A. Khatun, A. K. M. F. Haque, S. Ahmed, and **M. M. Rahman**, Design and implementation of iris recognition based attendance management system, in International Conference on Electrical Engineering and Information Communication Technology (ICEEICT), 2015.

(6) **M. M. Rahman**, A. K. M. F. Haque, M. Hasan, N. Sul-tana, and M. Z. Islam, Designing and development of voice to machine interfacing technique, in International Conference on Electrical Engineering and Information Communication Technology (ICEEICT), 2015.

(7) A. K. M. Fazlul Haque, **M. M. Rahman**, A. Khatun, M. Younus, and J. F. Chowdhury, Voice and irish based automatic moving camera, in International Conference on Reliability, Infocom Technologies and Optimization, 2015.

(8) A.K.M Fazlul Haque, **M.M. Rahman**, Amena Khatun, Real Time ECG Acquisition, Monitoring and Transmission for Emergency Cardiac Situation, Journal of Bangladesh Electronic Society, Vol 13, no. 1-2, July, 2013.

(9) Md. Taslim Arefin, Md. Zahirul Islam, Md. Asaduzzaman Khan, **M.M. Rahman**, A.S.M Shaem, Wavelet Based Performance Analysis of Image Compression, International Journal on Recent and Innovation Trends in Computing and Communication, August 2014.

(10) **M.M. Rahman** , Amena Khatun , A.K.M Fazlul Haque , Shafee- Ul-Mahmud Chowdhury, Implementation of Secured IP Telephony System, Journal of ICT, Jahangirnagar University, 2015.