

Haque Ishfaq

CONTACT INFORMATION	Department of Computer Science McConnell Engineering Building McGill University 3480 Rue University Montreal, QC H3A 0E9 Canada	(438)927-9577 haque.ishfaq@mail.mcgill.ca https://hmishfaq.github.io/
RESEARCH INTERESTS	Reinforcement learning, statistical machine learning, sequential decision making, optimizations.	
EDUCATION	Montreal Institute of Learning Algorithms & McGill University Ph.D. Student, Computer Science (expected May 2023) <ul style="list-style-type: none">• Research Topic: Reinforcement learning, machine learning, optimizations• Advisor: Prof. Doina Precup Stanford University M.S. Candidate, Statistics, June 2018 B.S. in Mathematical and Computational Science, June 2015 <ul style="list-style-type: none">• McCaw Scholar (2011–2015), four-year academic scholarship for international students.	
HONORS AND AWARDS	2018 2014 2014 2013 2012 2011–2015 2010 2009 2008 2009, 2010 2006–2008	Graduate Excellence Fellowship, McGill University Undergraduate Research and Advising Grant, Stanford University Social Impact Grant, Stanford Haas Center for Public Service - 1 of 2 recipients of the grant in the entire university. Computer Science Undergraduate Research Experience (CURIS), Stanford University EE Research Experience for Undergraduates (REU), Stanford University McCaw Scholar, Stanford University - Four-year academic scholarship for international students Honorable Mention, International Mathematical Olympiad, Kazakhstan Honorable Mention, International Mathematical Olympiad, Germany Participant, International Mathematical Olympiad, Spain 1st Runner-up, Bangladesh Mathematical Olympiad Champion, Bangladesh Mathematical Olympiad
PROGRAMMING	Python, R, C/C++, Julia, UNIX.	
FRAMEWORKS	PyTorch, TensorFlow, Keras, Scikit-learn.	
WORK EXPERIENCE	NVIDIA, Applied Deep Learning Research Intern , Santa Clara (June–Sept. 2017) <ul style="list-style-type: none">• Worked on optical flow and video frame prediction problem under Bryan Catanzaro.• Designed and implemented recurrent autoencoder with temporal skip connections consisting of Convolutional LSTM module within it.	

Quantitative Imaging Lab, Research Assistant, Stanford, California (April–Dec. 2017)

- Working on deep learning methods for biomedical image analysis under Prof. Daniel Rubin.
- Designed and implemented deep network incorporating Variational Autoencoder and Triplet Network to learn semantic visual representation of medical image data.

Mobilize Center, Research Assistant, Stanford, California (Sept.–Dec. 2016)

- Worked on accelerometer generated temporal data classification for activity recognition using data programming and weak supervision based approaches.
- Designed heuristic labeling functions to label unlabeled data in a weakly supervised manner using data programming (Snorkel) paradigm developed by Chris Re group at Stanford CS department.

Silicon Studio, Data Science Intern, Tokyo, Japan (July–Sept. 2016)

- Designed and implemented machine learning algorithm to forecast and simulate individual player behavior in mobile games.
- Used LSTM Recurrent Neural Network and ARIMA based models for player behavior forecasting.

Verizon Labs, Data Science Intern, Palo Alto, California (June–Sept. 2015)

- Worked on Ad targeting using clickstream data.
- Designed and implemented machine learning and statistical model that would allow Verizon to grow their Ad targeting to non-opt-out customers by 7.4X.

Salzman Lab, Research Assistant, Stanford School of Medicine (June–Aug. 2014)

- Using R, performed correlation analysis of expression level of different circular RNAs between human and mouse samples.
- Used molecular biology technology (qPCR, RNA extraction) to study circular RNA.

Guibas Lab, Summer Research Program, Stanford School of Medicine (June–Aug. 2013)

- Studied mathematical theory behind 3D Kinetic Alpha Complex and its application in design of algorithm for constructing cell complex in space-time.
- Studied computational geometry and topology as part of the project.

PREPRINTS

Ishfaq, H., Hoogi, A. and Rubin, D., 2018. *TVAE: Triplet-Based Variational Autoencoder using Metric Learning*. arXiv preprint arXiv:1802.04403.

PRESENTATIONS

Duan, T.*, Chartock, E*, **Ishfaq, H.***, Novosad, P., Asher, S., Burke, M., Lobell, D., Ermon, S. (2017, December). *Predicting Poverty with Satellite Imagery in Bangladesh and India*. Talk presented at CS 325B Final Project Presentation Session, Stanford, CA.

Yang, C.*, **Ishfaq, H.*** (2017, March). *Question Answering on SQuAD using Co-attention Mechanism and Highway Network*. Poster presented at CS 224N Final Project Poster Session, Stanford, CA.

Ishfaq, H. (2016, December). *Segmenting Triaxial Accelerometer Data via Data Programming*. Poster presented at CS 221 Final Project Poster Session, Stanford, CA.

Balakrishnan, A., Chaturapruek, T, Fan, F, **Ishfaq, H.**, Roitman, L. (2016, December). *Smarter Initializations in Multi-modal Neural Networks to Predict Transcription Factor Binding*. Poster presented at CS 273B Final Project Poster Session, Stanford,

CA.

Ishfaq, H.*, Washington, P.*, Sahasrabudhe, S.* (2015, December). *Predicting Future Interactions Between Users in Signed Social Networks*. Poster presented at CS 224W Final Project Poster Session, Stanford, CA.

TEACHING
EXPERIENCE

Fall	2015	Teaching Assistant, Machine Learning (Andrew Ng)
Winter	2016	Teaching Assistant, Cryptography (Dan Boneh)
Winter	2017	Teaching Assistant, Probabilistic Graphical Model (Stefano Ermon)
Summer	2011	Academic Mentor, Bangladesh National Mathematics Camp

LANGUAGES

English (Fluent), Bengali (Native), Japanese (Conversational Level).