Zafarali Ahmed

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EDUCATION	**MSc. Computer Science**, McGill University	September 2017 - present
	Supervised by Dr. Doina Precup and Dr. Simon Gravel	
	BSc. Quantitative Biology, Minor Computer Science, McGill University	2017
	First Class Honours, GPA: 3.80/4.00	

TOOLS

Software: Python, Tensorflow, Pytorch, Git, Java, C++
Open Source Contributions: MLJS Matrix, AttentionRNN, Keras, Faker

EXPERIENCE

Graduate Student Research Assistant — September 2017 - present
Reasoning and Learning Lab, Montreal Canada
- Interests in meta-active Bayesian deep learning, graph neural networks and applications of deep learning to genomics.

Deep Learning Research Associate — April 2017 - Nov 2017
Datalogue, Montreal Canada
- Implemented and shipped production-level deep conditional random fields for entity recognition, convolution neural networks for classification and attention-based recurrent neural networks for machine translation.
- Improved accuracy of main product from 90% to 94% with a $13\times$ reduction in parameters.

Computational Oncology Research Assistant — Jan 2015 - April 2017
Gravel Lab, McGill University
- Developed a theoretical cancer model with 7,000+ lines of Python with eventual use of a C++ model to investigate tumor heterogeneity.
- Deployed code on high performance clusters to speed up experiments

Co-Founder, Scientific Lead — June 2015 - Dec 2015
QuantiScience, Montreal
- Engineered an algorithm to extract heart rate variability and infer mental stress from data obtained by the Fitbit Charge HR.
- Launched product to 3 beta testers and demoed in San Francisco as part of the top 10% of the AngelHack HACKcelerator.

PUBLICATIONS +WRITING

Ahmed Z. and Gravel S (2017). *Genetic Diversity in Circulating Tumor Cells*, 6th RECOMB Satellite Workshop on Computational Cancer Biology. [doi:10.1101/113480]
Ahmed Z. (2017). *How to Visualize Your Recurrent Neural Network with Attention in Keras*, Datalogue Technical Blog [30,000+ views and 545 claps]

AWARDS

Canada Graduate Scholarship, CIHR	2017-2018
Industry Experience Award, NSERC	2017
Computational Biology Summer Award, CIHR	2015 & 2016
1st Place, Microsoft BrunchHack: Machine Learning	2015
Natural Language Processing Prize, Big Data Week Hackathon	2015

SELECTED TALKS

Introduction to the Attention Mechanism, Montreal Deep Learning Meetup	2017
The Rise of Conversational AI, Montreal Inaugural Chatbot Meetup	2016
Predicting with Data, Osmos Academy	2016

VOLUNTEER POSITIONS

Founding Member and Co-Vice-President Events — 2015 - 2017
McGill Integrative Bioscience Students Society
- Launched a club for interdisciplinary biologists, successfully partnering with Google and Microsoft. Organized 5 events with an average of 80+ people per event.

SELECTED PROJECTS
(full portfolio at www.zafarali.me)

Towards electroencephalography-based prosthetics — Sept 2015 - Dec 2015
COMP 598: Applied Machine Learning [Grade: A]
- Compared transfer learning approaches versus personalized learning of neural networks, logistic regression and support vector machines as software for 3D printed arms.