Zafarali Ahmed

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EDUCATION

MSc. Computer Science, McGill University and Mila — September 2017 - May 2019
Supervised by Dr. Doina Precup and Dr. Simon Gravel

BSc. Quantitative Biology, Minor Computer Science, McGill University — 2017

TOOLS

Software: Python, Tensorflow, Pytorch, Git
Open Source Contributions: Tensorflow, embedKB, MLJS Matrix, AttentionRNN, Keras

EXPERIENCE

Student Researcher — June 2018 - Nov 2018
Google Brain, Montreal Canada

Deep Learning Research Associate — April 2017 - Nov 2017
Datalogue, Montreal Canada

- Researched, 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× reduction in parameters.

Computational Oncology Research Assistant — Jan 2015 - April 2017
Gravel Lab, McGill University

- Used theoretical cancer models to investigate genetic heterogeneity. Led to a publication.

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
(full list at Google Scholar)

Ahmed Z., Le Roux N., Norouzi M., Schuurmans D. (2018) *Understanding the impact of entropy on policy optimization*, Preprint

Bachman P., Islam R., Sordoni A., **Ahmed Z.** (2018) *VFunc: a Deep Generative Model for Functions*, ICML Workshop on Prediction and Generative Modeling in Reinforcement Learning

Ahmed Z. and Gravel S (2018). *Genetic Diversity in Circulating Tumor Cells*, Molecular Biology and Evolution

Ahmed Z. (2018). *How to Visualize Your Recurrent Neural Network with Attention in Keras*, Datalogue Technical Blog [67k views and 1.6k claps]

AWARDS

Canada Graduate Scholarship, CIHR — 2017-2018
Industry Experience Award, NSERC — 2017
Computational Biology Summer Award, CIHR — 2015 & 2016
Tomlinson Engagement Award for Mentoring — 2016 & 2017

SELECTED TALKS

What Makes a Good Policy Optimization Algorithm? CIFAR DLRLSS — 2018
Introduction to the Attention Mechanism, Montreal Deep Learning Meetup — 2017
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.