

# Zafarali Ahmed

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<b>EDUCATION</b>	<b>MSc. Computer Science</b> Starting September 2017 <i>Supervisors:</i> Dr. Doina Precup and Dr. Simon Gravel
	<b>BSc. Quantitative Biology, Minor Computer Science</b> Expected May 2017 McGill University, Montreal, Canada <i>Relevant Courses:</i> Applied Machine Learning, Artificial Intelligence, Algorithm Design, Statistics <i>Teaching Roles:</i> Undergraduate Teaching Assistant for Biophysics (2015-2017)
<b>SKILLS</b>	<b>Languages:</b> Python, JavaScript, Java, C/C++, bash <b>Machine Learning Libraries:</b> SciKit-learn, Keras, TensorFlow
<b>EXPERIENCE</b>	<b>Deep Learning Research Associate</b> May 2017 - present Datalogue, Montreal Canada <ul style="list-style-type: none"><li>• Researching deep learning algorithms for automated data handling and preparation and ontology extraction in the domain of Natural Language Processing.</li></ul> <b>Computational Oncology Research Assistant</b> Jan 2015 - April 2017 Gravel Lab, McGill University <ul style="list-style-type: none"><li>• Developed a theoretical cancer model with 7,000+ lines of Python with eventual use of a C++ model to investigate tumor heterogeneity.</li><li>• Investigated the relationship of tumor heterogeneity and circulating tumor cell clusters.</li></ul> <b>Co-Founder, Scientific Lead</b> June 2015 - Dec 2015 QuantiScience, Montreal <ul style="list-style-type: none"><li>• Engineered an algorithm to extract heart rate variability and infer mental stress from data obtained by the Fitbit Charge HR.</li><li>• Launched product to 3 beta testers and demoed in San Francisco as part of the top 10% of the AngelHack HACKcelerator.</li></ul>
<b>PUBLICATIONS</b>	<b>Ahmed Z.</b> and Gravel S (2017). <i>Genetic Diversity in Circulating Tumor Cells</i> - Proceedings of 6th RECOMB Satellite Workshop on Computational Cancer Biology. [doi:10.1101/113480]
<b>AWARDS</b>	<b>Industry Experience Award</b> 2017 Natural Sciences and Engineering Council <b>Computational Biology Summer Studentship Award</b> 2015 and 2016 Canadian Institutes of Health Research <b>Conference Travel Award</b> 2016 Centre for Applied Mathematics in Bioscience and Medicine <b>1st Place, Mathematical and Computational Sciences</b> 2015 McGill Undergraduate Research Conference <b>Tomlinson Engagement Award for Mentoring</b> , McGill University 2016 and 2017 <b>1st Place</b> , Microsoft BrunchHack: Machine Learning 2015 <b>1st Place</b> , AngelHack Montreal 2015 <b>2nd Place</b> , Montreal Expedia Hackathon 2015 <b>Natural Language Processing (NLP) Prize</b> , Big Data Week Hackathon 2015
<b>CONFERENCES AND TALKS</b>	<b>The Rise of Conversational AI</b> 2016 Montreal Inaugural Chatbot Meetup, Microsoft Montreal <b>Computational Modeling and Inference of Genetic Diversity in Cancer</b> 2016 Functional Genomics Group, Goodman Cancer Research Centre, Montreal <b>Predicting with Data</b> 2016 Osmos Academy Montreal <b>Mathematical Modelling of Infectious Disease Spread</b> 2016 Mathematical Bioscience Institute, Ohio State University <b>Impact of Tumor Dynamics on Heterogeneity, Sampling Bias &amp; Metastasis</b> 2015 Undergraduate Research Conference, McGill University

**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](http://www.zafarali.me))

**MinervaBot**

April 2016 - Present

- Designed and launched a Facebook Messenger bot to help students find information about courses and buildings on McGill campus.
- Implemented machine learning classifiers, information retrieval and clever REGEX-based algorithms resulting in > 80% bot success rate.

**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.

**Analysis of Urban Spatial Patterns**

April 2014

GEOG 217: Cities in the Modern World Final Project [Grade A: 90%]

- Planned and executed a field survey to discover 8 key urban metrics of 14 Montreal neighbourhoods. Used statistical analysis to interpret the relationship between space and urban metrics.