Zafarali Ahmed

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EDUCATION

BSc. Quantitative Biology, Minor Computer Science — Expected May 2017
McGill University, Montreal, Canada
Teaching Roles: Undergraduate Teaching Assistant for Biophysics (2015-2017)
Relevant Courses: Applied Machine Learning, Artificial Intelligence, Algorithm Design, Statistics

EXPERIENCE

Computational Oncology Research Assistant — Jan 2015 - Present
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.
- Implemented pipelines to run batch data analysis and used high performance computing clusters to execute.
- Poster prize and monetary awards from Canadian government (See Awards.)

Co-Founder, Scientific Lead — June 2015 - Dec 2015
QuantiScience

- Engineered an algorithm to extract heart rate variability and stress index 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.

Software Developer Intern — Summer 2014
Citation.io, Montreal.

- Developed, documented and delivered a front-end minimum viable product for an online reference management software using AngularJS and D3.js.

SKILLS

Languages: Python, Java, JavaScript, C/C++, bash
Scientific Languages: SciPy, MATLAB, R
Machine Learning Libraries: SciKit-learn, Lasagne, Keras

AWARDS AND HACKATHONS

Computational Biology Summer Studentship Award — 2015 and 2016
Canadian Institutes of Health Research

1st Place, Mathematical and Computational Sciences — 2015
McGill Undergraduate Research Conference

Tomlinson Engagement Award for Mentoring, McGill University — 2016 and 2017

1st Place, Microsoft BrunchHack: Machine Learning — 2015

1st Place, AngelHack Montreal — 2015

2nd Place, Montreal Expedia Hackathon — 2015

Natural Language Processing (NLP) Prize, Big Data Week Hackathon — 2015

VOLUNTEER POSITIONS

Founding Member and Co-Vice-President Events — 2015 - Present
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)

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.

CONFERENCES AND TALKS

Computational Modeling and Inference of Genetic Diversity in Cancer Functional Genomics Group, Goodman Cancer Research Centre, Montreal 2016

Predicting with Data Osmos Academy 2016

Mathematical Modelling of Infectious Disease Spread Mathematical Bioscience Institute, Ohio State University 2016

Undergraduate Research Conference McGill University 2015