Zafarali Ahmed

www.zafarali.me | github.com/zafarali
zafarali.ahmed@mail.mcgill.ca | 514-432-7592

EDUCATION

MCGILL UNIVERSITY
BSc. Quantitative Biology
Minor : Computer Science
Expected Graduation : May 2017

SKILLS

TOOLS
Unix • Git • Vi • ssh • iPython Notebook

PROGRAMMING
Languages
Python • Java • JavaScript • C • bash
Scientific
iPython • R • MATLAB
Libraries
SciPy (Numpy, Matplotlib, Pandas) • SciKit-learn
Web Frameworks
D3.js • AngularJS • Express • Bootstrap • Plot.ly

MANAGEMENT
Slack • Jira • Basecamp • Trello

AWARDS

Tomlinson Engagement Award for Mentoring, 2015/2016
Biophysics Undergraduate Teaching Assistant
Canadian Institutes of Health Research, Summer 2015
Computational Oncology Summer Studentship Award
AngelHack Montreal, June 2015
1st Place, Best Pitch & Product - OfficeLight
Expedia Hackathon, May 2015
2nd Place, Best App - Flaneur
Big Data Week Hackathon, April 2015
Data Science and the Natural Language Processing Prize

LINKS

Github: @zafarali
Plot.ly: iamzaf
Twitter: @zafarali
LinkedIn: zafaraliahmed

EXPERIENCE

COMPUTATIONAL ONCOLOGY RESEARCH ASSISTANT
Jan 2015 - Present | Gravel Lab, McGill University, Montreal, Canada

- Formulated a theoretical toy model to explore the relationship of tumor heterogeneity with spatial patterns.
- Implemented the model in 7000+ lines of python and used high performance computing clusters to execute it.

BIOPHYSICS UNDERGRADUATE TEACHING ASSISTANT
Sept 2015 - Present | Dept. of Physics, McGill University, Montreal, Canada

- Designed semester-long road plan to improve course content and prepare it for teaching in Winter.
- Creation of tutorial sessions to help students understand MATLAB and basic mathematical concepts used in biophysics.

SOFTWARE DEVELOPER INTERN
Jul 2014 - Sept 2014 | Citation.io, Montreal, Canada

- Designed the front-end minimum viable product for an online reference management software using AngularJS.
- Documented code framework and specified maintenance procedure for future employees.

PROJECTS

STRESSLESS BY QUANTISCIENCE June 2015 - present
AngelHack HACKcelerator, San Francisco [Top 10%]

- Designed and launched a product that quantifies employee *stress* in the workplace.
- Implemented validated learning via customer feedback surveys to deploy iterative updates to the product.
- Engineered an algorithm to extract heart rate variability statistics from heart rate time series data obtained by wearable devices.

FLANEUR June 2015
Montreal Expedia Hackathon [Winner 2nd Place]

- Designed an application to provide urban travellers with a one-click itinerary for the day based on their mood.
- Used Cordova to target multiple mobile platforms to provide a minimum viable product in under 24 hours.

TWITFEM ATTITUDE ANALYSIS April 2015
Montreal Big Data Week Hackathon [Winner NLP and Data Science Prize]

- Conducted *attitude* analysis for 1M tweets to discover most common words for feminists and anit-feminists when talking about each other.
- Created the tokenizer and visualizations for the data.

ANALYSIS OF URBAN SPATIAL PATTERNS April 2014
GEOG 217: Cities in Modern World Final Project [Grade: A / 90%]

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

RELEVANT COURSES

Applied Machine Learning, Statistics, Probability, Algorithms and Data Structures, Ordinary Differential Equations, Introduction to Biophysics