

Siddharth Reed

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Education

Master of Science - Computational Biology

CARNEGIE MELLON UNIVERSITY

Pittsburgh, PA

2020 - Present

- Relevant Coursework: Algorithms, Statistics, Molecular Biology

Honours Bachelor of Science - Molecular Biology & Genetics Co-op

McMASTER UNIVERSITY

Hamilton, ON

2015 - 2020

- Relevant Coursework: Software Development, Bioinformatics, Microbial Genetics

Experience

Hoffman Lab, University Of Toronto

May 2019 - Aug. 2019

RESEARCH ASSISTANT CO-OP ([LAB SITE](#))

- Worked on trying comparing transcriptomic data between publicly available placental, cancer and “normal” tissues
- Working to trouble shoot data analysis and cleaning, while preparing weekly progress reports in an online notebook
- Learning about the application of linear models to differential expression analysis and dealing with batch effects
- Creating clear intuitive visuals to help communicate trends and patterns in biological data

Adapsyn, McMaster University

Jan. 2018 - Aug. 2018

DATA SCIENCE CO-OP ([GITHUB](#))

- Worked on many different data analysis problems to accelerate natural products discovery
- Used statistics and statistical learning techniques to help direct the efforts of chemists in natural products discovery
- Communicated effectively with wet lab scientists to address problems from a computational perspective
- Became adept at working under sudden deadlines and switching tasks frequently

Golding Lab, McMaster University

Sep. 2018 - April 2019

UNDERGRADUATE THESIS STUDENT ([GITHUB](#))

- Working on studying the relationship between horizontal gene transfer rates and CRISPR-Cas systems
- Building and end-to-end pipeline to download, process, analyze and visualize public genomic data
- Using methods in network theory and statistics to reach conclusions about biological phenomena
- Presented my work in a clear, engaging way both as a presentation and manuscript

Dry Lab, McMaster iGEM Team

MEMBER ([GITHUB](#))

May 2017 - Present

- Implementing a genetic algorithm and neural network to simulate SELEX sequence optimization *in silico*
- Working collaboratively with a team to build the project, manage documentation and version control using git
- Updating and explaining the computational aspects of the project to other members and the public

Extracurriculars

Frontier College

VOLUNTEER TUTOR

Sep. 2015 - April 2017

- Drop in tutoring for high school students, mostly involving math and biology.
- Going over concepts thoroughly, helping student understand difficult concepts.

Canadian Society for Epidemiology and Biostatistics

BLOG CONTRIBUTOR

Sep. 2016 - April 2017

- Wrote informative blog posts to try and engage the public in epidemiology.
- Used demonstrations to explain concepts, making them accessible to a broad audience.

Honours & Awards

2017 **Recipient**, NSERC Undergraduate Student Research Award

2016/17 **Recipient**, McMaster Dean's Honor List

Skills

Languages	English, French
Research	Literature Review, Data Mining, Data Analysis, Data Visualization, Experimental Design
Programming	Proficient: Python, Bash, Vim, Git, LaTeX, R Familiar: go, Matlab, Perl, Java, Cluster Computing (slurm, sungrid)