Siddharth **Reed**

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Education

Master of Science - Computational Biology
Pittsburgh, PA

Carnegie Mellon University
2020 - Present

- Relevant Coursework: Algorithims, Statistics, Molecular Biology

Honours Bachelor of Science - Molecular Biology & Genetics Co-op
Hamilton, ON

McMaster University
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
May 2017 - Present

Member (Github)

- 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
Sep. 2015 - April 2017

Volunteer Tutor

- 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
Sep. 2016 - April 2017

Blog Contributor

- 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 Visulization, Experimental Design

Programming Proficient: Python, Bash, Vim, Git, LaTeX, R

Familiar: golang, Matlab, Perl, Java, Cluster Computing (slurm, sungrid)