

Brechann McGoey

Ph.D.

Quantitative geneticist with expertise in data analysis, statistics and communication.
Transitioning to data science. Passionate about finding meaningful stories in big data.

Experience and Education

- 2017-09 - 2017-11** **Fellow**
The Data Incubator
- Completed data science projects, with a focus on machine learning (SKLearn, TensorFlow, NLP), web scraping, data wrangling (Pandas, SQL), interactive visualization (bokeh, D3.js) and distributed computing (MapReduce, Spark)
 - Used NLP and graph analysis (NetworkX), to identify distinct individuals, remove duplicates and analyze relationships in a dataset scraped from social event webpages
 - Scraped data for 10,000+ books from Goodreads, used NLP to extract genres, themes and sentiments from descriptions and reviews, and leveraged Pandas, NumPy and SKLearn to predict novel success
- 2011-09 - 2018-10** **Ph.D. Ecology and Evolutionary Biology**
University of Toronto
- Used advanced linear algebra methods and Bayesian models to quantify genetic diversity
 - Sanitized, performed genome wide data analysis and outlier detection on a 5GB+ genetic dataset
 - \$115,000+ in scholarships and awards
- 2011-04 - 2011-08** **Research Assistant**
Royal Ontario Museum
- Coordinated specimen digitizing and databasing
 - Used linear models, PCA and fourth corner analysis to determine connections between ecological, genetic and morphological data
- 2010-01 - 2011-03** **Science Intern**
Royal Botanical Gardens
- Coordinated and executed research projects, analyzing complex ecological data in SYSTAT & R
- 2007-09 - 2009-08** **MSc. Ecology and Evolutionary Biology**
University of Toronto
- Implemented mathematical models using SAS and R to examine phenotypic selection
 - \$20,000+ in scholarships
- 2003-09 - 2007-04** **BSc. Biology**
University of Guelph
- Graduated with Distinction

Awards and Accomplishments

Writing

5 peer reviewed publications, 3 newspaper and magazine articles

Communication

2 teaching awards, best talk award, 8 conference presentations

Personal Info

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E-mail

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GitHub

<https://github.com/brechann-mcgoey>

WWW

www.brechann.com

LinkedIn

www.linkedin.com/in/brechann-mcgoey-62018

Skills

Statistical modelling

(Bayesian and frequentist)

Machine learning

(Sklearn, TensorFlow)

Data visualization

(Bokeh, Altair, Plotly, D3.js)

Graph analysis

(NetworkX)

NLP

(NLTK)

Web scraping

(BS4, Selenium, Requests)

Programming Languages

R



Advanced

Python



Intermediate

SQL



Intermediate