# BOYANG QIU, MSc

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Scientist turned data scientist. Experienced researcher with a history of utilizing statistics & data to validate and communicate findings. Achievements include 2 peer-reviewed publications where I published novel findings born from data analysis and data visualization.

## Data Science and Modeling

- TensorFlow 2.0/Keras
- Scikit-Learn
- Matplotlib
- Statsmodels
- XGBoost
- A/B Test Design
- Statistical Testing
- Requests/BeautifulSoup
- Tableau

## Programming

- Python
- MySQL
- Flask
- HTML
- CSS

## EXPERIENCE

### Data Science Teaching Assistant | BrainStation

JUNE 2020 – Present, TORONTO, ON, CANADA

- Created and delivered data science content to a class of 20 students on topics such as SQL, statistics, Python, and machine learning.
- Supported students through troubleshooting, addressing concerns and answering questions to ensure their career transition journey is successful; improved course resources based on student feedback.

### Research Associate | The Hospital for Sick Children

OCT 2016 – JUN 2019, TORONTO, ON, CANADA

- Oversaw the completion, developed reproducible statistical testing pipelines, & published the results of a large-scale therapeutic screen for the first treatment for Nemaline Myopathy
- Reduced time and cost for 2 common laboratory experiments by 90% and 10-fold, respectively, while maintaining quality of results
- Conducted rigorous A/B Testing of therapeutic leads

## EDUCATION

### BrainStation | Diploma, Data Science

APR - JUN 2020, TORONTO, ON, CANADA

### University of Toronto | Master of Science, Molecular Genetics

SEPT 2016 – JUNE 2019, TORONTO, ON, CANADA

### Western University | Bachelor of Medical Sciences, Honour's Chemical Biology

SEPT 2012 – MAY 2016, LONDON, ON, CANADA

- 2016 Western University Chemical Biology Gold Medal
- 2015 NSERC Summer Undergraduate Research Grant

## PROJECTS

### Enigma - Predicting Pitches Using Machine Learning & Visualizing Pitching Statistics | BrainStation Capstone Project

Utilized scraped baseball data & a neural network to predict baseball pitches at **65% peak accuracy** & **0.5 weighted F1 score**. Created a data visualization centric scouting report. Deployed as a locally hosted web app through Flask.

*Skills used: Matplotlib, BeautifulSoup, Flask, sk-learn, Tensorflow/Keras*

### Cutibacterium acnes and the shoulder microbiome (Pubmed ID: 29908759) | Project Lead

The first investigation into & visualization of the human shoulder microbiome.

*Skills used: R*

### Failure to identify modifiers of NEBULIN-related nemaline myopathy in two pre-clinical models of the disease (Pubmed ID: 31530540) | Project Lead

Developed statistical pipelines for finding nemaline myopathy therapeutics.

*Skills used: GraphPad Prism, Python, A/B & Hypothesis Testing*