

# Bingfan Liu

<https://github.com/Bingfan-Liu> ■ (519) 721 – 5934 ■ [b242liu@uwaterloo.ca](mailto:b242liu@uwaterloo.ca)

## SUMMARY OF QUALIFICATION

---

- Proficiency in data analyzing in R.
- Proficiency in querying and manipulation of data base in SQL.
- Intermediate level in general programming in Python.
- Excellent understanding of statistical models through projects of Experimental Design, GLM, Time Series.

## EXPERIENCE

---

### Research Assistant in Law Economics

February – April, 2017

*University of Waterloo, Department of Economics*

- Data collection for legislative activity in the Canadian House of Commons since Confederation.

## PROJECT

---

### Sampling and Experimental Design

- Performed the regression estimating and strata sampling.
- Constructed CRD, RBD and Factorial Design for multiple treatments experiments.
- Performed ANOVA tests and some visualization using graphical skills.

### Generalized Linear Model

- Modeled Binomial, Poisson data by choosing different links.
- Handled overdispersed data by using Ad Hoc and mixed model methods.

### Time Series Analysis

Ongoing

- Used ARIMA model to forecast Canadian GDP.
- Used VAR model to forecast bitcoin price.
- Performed portfolio optimization using CIBC, Google, Munich Re, Sinopec and Fibertech stock prices.

### SQL

Ongoing

- Queried information from multiple tables using subquery and join-table techniques based on foreign keys.
- Manipulated data by inserting new data, updating and deleting the existed data.

## AWARD

---

### The American Statistical Association DataFest Competition 2018

May 6<sup>th</sup>, 2018

#### Prize of Best Use of External Data

- Visualized and compared the structure of the labour market (labour supply and labour demand), using both the data from Indeed.com and Statistics Canada.
- Forecasted the labour demand in different industries in the next five years using the ARIMA model.

## EDUCATION

---

### Bachelor of Science, Honors Mathematics and Applied Mathematics

2014 - 2017

*Shan Dong Normal University*

### Bachelor of Arts, Honors Economics Joint Honors Mathematics, Econometrics Specialization

Expected – Spring 2018

*University of Waterloo*

- **Major Average:** 90.56%
- **Academic Standing:** Excellent Standing, On Dean's Honors List
- **Relevant Courses:** Time series, GLM, Sampling and experimental design, Applied linear model, Programming in Python, Data types and structures, Applied probability, Money and banking, International trade, Game theory.

## EXTRACURRICULAR ACTIVITIES

---

- Member of University of Waterloo table tennis club.
- Member of Feiyue, roller skating club.
- Member of Konja, Japanese language and culture club.
- Member of University of Waterloo data science club.