

# Qing Zhang

+44 (0)7592 57 0439 | +86 153 0817 2670

qing.zhang@durham.ac.uk | qing.zhang.990806@gmail.com

Mathematical Sciences, Durham University, DH1 3LE, UK

<https://www.linkedin.com/in/qingzhangstatistics/>

## EDUCATION

### University of St Andrews

Sep. 2021 – Sep. 2022

MSc in Statistics

St Andrews, UK

- GPA: 16.0/20.0
- Dissertation on *Statistical Impact of Gene Expression Data Generated by Three Measurement Platforms on Gene Regulatory Network Reconstruction Methods* (achieving **highest grade** in programme: 18.5/20)

### University of Plymouth

Sep. 2020 – Jul. 2021

BSc (Hons) in Mathematics and Statistics

Plymouth, UK

- GPA: 78.59/100
- First Class Honours** graduate in a year-long exchange programme to obtain **double Bachelor's degrees**

### Yunnan University

Sep. 2017 – Jul. 2021

BSc in Statistics

Kunming, China

- GPA: 3.6/4.0 (equivalent to **First Class Honours**); School ranking: 10/204 (**5%**)

### University of British Columbia

Jun. 2019 – Aug. 2019

Visiting Student

Vancouver, Canada

- Courses: Game Theory & Symmetry

## PUBLICATIONS

### Journal Papers

- Riley, S., **Zhang, Q.**, Tse, W. Y., Connor, A., & Wei, Y. (2022). Using Information Available at the Time of Donor Offer to Predict Kidney Transplant Survival Outcomes: A Systematic Review of Prediction Models. *Transplant International*, 116.
- Tan, J., **Zhang, Q.**, Sia, W.Y. and Qin, Y. (2021). Predicting Emergency Repairs using Classification Method, *The Plymouth Student Scientist*, 14(2), pp. 465–496.

### Conference Submission

- Zhang, Q. (Apr. 2021). Analysis on Influencing Factors of Men Single Skating Score in Figure Skating During Winter Olympics Cycle. Poster presented at the British Conference of Undergraduate Research (BCUR), Leeds.

## EXPERIENCE

### Research Assistant

Sep. 2023 – present

Durham University

UK

- Worked on Educational Endowment Foundation (**EEF Projects**)
- Work package 2: Bayesian Additive Regression Tree on EEF trials and National Pupil Database (NPD)
- Work package 5: Bayesian Additive Regression Tree on EEF trials and National Pupil Database (NPD)
- Work package 6: Bayesian Additive Regression Tree on EEF trials and National Pupil Database (NPD)
- PACT-3 Project: Immediate Post-test and delayed post-test

## Research Assistant

University of St Andrews

Sep. 2022 – Feb. 2023

UK

- Worked on Holistic Approach to Unravelling Antibiotic Resistance in East Africa (**HATUA Consortium**)
- Conducted a **literature review** of 300 relevant papers studying risk factors of antibiotic resistance
- Created **data visualisation** for publications to show spatial pattern of multi-drug resistance within three countries

## Research Assistant

University of Plymouth

Jun. 2021 – Sep. 2021

UK

- Focused on a **systematic review** of clinical prediction models for survival in adult recipients with kidney transplants
- As a **second reviewer**, retrieved 4,026 citations and screened all records according to **eligibility criteria**
- Summarised characteristics of 23 eligible articles, then conducted **random-effects meta-analyses** and **forest plots**

## PROJECTS

### Statistical Impact of Gene Expression Data Applied on Network Methods

May 2022 – Aug. 2022

MSc Dissertation Project (University of St Andrews), Individual

UK

- Explored statistical variations across the entire **transcriptomic analysis** in prostate cancer studies
- Considered complicated GRN reconstruction models into **binary classification methods** in machine learning

### Plymouth Community Homes (PCH) Statistics Research Project

Feb. 2021 – May 2021

BSc Final Year Team Project (University of Plymouth), Team Member

UK

- Conducted data visualisation and analysis of ~14,200 data points using R, JavaScript, Pivot Tables, **logistic regression** model, **decision tree** algorithm, **K-nearest neighbours** method and **random forest** model
- Authored an academic report using **LaTeX** for project documentation and delivered presentations to non-statisticians

### China Undergraduate Market Survey and Analysis Contest

Oct. 2019 – Aug. 2020

Contest (Yunnan University), Team Leader

China

- Worked on *A Social Investigation on Public Legal Awareness and Legal Knowledge of College Students in China* using R, Python, **questionnaires**, reliability analysis, validity analysis, **factor analysis** and **random forest** model

## SCHOLARSHIPS & AWARDS

### Academic Prize for Distinction in the Dissertation

2022

University of St Andrews, UK

### University of Plymouth Scholarship

2021

University of Plymouth, UK

### Yunnan University Scholarship

2018 – 2021

Yunnan University, China

### National Second Prize in China Undergraduate Mathematical Contest in Modelling

2020

Contest Awards, China

### Honorable Mention in COMAP's Interdisciplinary Contest in Modelling

2020

Contest Awards, USA

### National Second Prize in China Undergraduate Market Survey and Analysis Contest

2020

Contest Awards, China

## SKILLS

**Software coding** – R, Git, SAS, SPSS Statistics, Python, SQL Server, MATLAB, Maple and LaTeX

**Statistical modelling** – GLMs, survival analysis, Bayesian inference, MCMC, mixed-effects/random-effects models

**Machine learning** – Regressions, trees, ensemble methods, regularization, unsupervised learning

**Languages** – English (fluent), Japanese (proficient), German (basic) and Mandarin (native)