Qing Zhang

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EDUCATION

University of St Andrews   Sep. 2021 – Sep. 2022
MSc in Statistics   St Andrews, UK

- GPA: 16.0/20.0
- Relevant Modules: Medical Statistics, Advanced Bayesian Inference, Applied Statistical Modelling using GLMs
- Dissertation on *Statistical Impact of Gene Expression Data Generated by Three Measurement Platforms on Gene Regulatory Network Reconstruction Methods* (achieving **highest grade** in school: 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%**)
- Relevant Modules: Medical Statistics, Multivariate Analysis, Big Data Analysis, Data Modelling

University of British Columbia   Jun. 2019 – Aug. 2019
Visiting Student   Vancouver, Canada

- Courses: Game Theory & Symmetry

PUBLICATIONS

Journal Papers

1. 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.

2. 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

1. 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   Oct. 2023 – present
Durham University   UK

- Worked on Educational Endowment Foundation (**EEF Projects**)
- PACT-3 Project: conducting **multilevel linear mixed model**s on multi-site randomised trails and reporting effect size based on unconditional variance
- WP2: extracting prior information from past effectiveness trials and building **Bayesian hierarchical linear model**s to understand the impact of use of past information on predicted probability that an intervention is successful

Research Assistant   Sep. 2022 – Feb. 2023
University of St Andrews   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   Jun. 2021 – Sep. 2021
University of Plymouth   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 $\sim$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)