

ALICE QIN

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EDUCATION

- Bachelor of Science (Honor) in Statistics**, The University of Auckland 2022-2023
- Class Representative for STATS 769: Advanced Data Science Practice
 - Class Representative for STATS 763: Advanced Regression Methodology
 - Other relevant courses: Statistical Computing, Applied Multivariate Analysis, Medical Statistics
 - Served as an UniGuide, assisting first-year students
- Bachelor of Science in Mathematics & Statistics**, The University of Auckland 2018-2021
- Certificate of Distinction: Numerical Computation, Probability and its Applications, Differential Equations, Understanding the Global Economy
 - Other relevant courses: Financial Mathematics, Statistical Modelling, Statistical Theory, Introduction to Practical Computing, Statistical Programming and Modelling using SAS, Accounting Information, Principles of Programming

SKILLS

Programming Languages	R, Python, Linux Bash, SAS, SQL, C#
Data Technology	XPath, JSON, HTML
Statistics	Tidyverse, Sampling, Survey, MASS, Caret, Glmnet, Survival, SparkR
Machine Learning	Numpy, Pandas, Scikit-learn, XGBoost, NLTK
Data Visualization	R Shiny, Matplotlib, Seaborn
IDE	Jupyter, R Studio, Visual Studio
Source Control	Git

EXPERIENCE

- Software Engineer Summer Intern** | Te Hiku Media Nov 2022 – Feb 2023
Keywords: Natural Language Processing (NLP), Python, Kubeflow, Linux bash
- [Here](#) is a brief introduction to the internship.
 - Gained an understanding of Māori data sovereignty.
 - Preprocessed over 110,000 Māori sentences.
 - Developed models for detecting and correcting misalignments in Māori.
- Data Scientist (Part-time)** | QWB Lab Nov 2022 – Apr 2023
Keywords: R Cloud, R Shiny, Dashboard, Data Visualization
- Analyzed survey data and designed well-being footprints for public services.
 - Built an interactive web app and created a Dashboard.
- Micro-internship Consultant** | Tupu Toa Nov 2021 – Dec 2021
Keywords: Leadership, Team Management, Consulting
- Led a team of five, responsible for managing work within the team and reporting to the supervisor.
 - Provided recommendations to help Tupu Toa select suitable partner organization with similar goals.
 - Conducted research on what can be improved for the support provided to Māori and Pacific students.
- Fundraising Manager** | The New Zealand Chinese Student Association Aug 2018 – Jan 2019
Keywords: Business Development, Partnership
- Building partnerships and finding potential sponsors for events.
 - Maintained good relationships with ongoing sponsors and partners for the association.
 - Developed new sponsors for various events.

Advanced Mathematics Tutor | HD Education

Feb 2021 – Feb 2022

- Taught Numerical Computation, Mathematical Probability and Introduction to Financial Mathematics.
- Received 100% positive feedback and recommendations from the students.

Mathematics Tutor | YouTutor

Dec 2018 – Feb 2021

- Taught Calculus and Statistics.

PROJECTS

Honor thesis | Predictive Models under Complex Sampling

Keywords: R, Machine Learning, Complex Survey, Sampling

- Simulation of complex survey designs like weighting and clusters.
- Delivered predictive models with machine learning algorithms such as Random Forest and XGBoost to solve complex survey problems.
- Owning the design and implementation of the entire machine learning workflow.
- Illustrated several alternative methods of cross-validation which match the sampling data from complex survey designs.
- [Here](#) is the dissertation.

Course project | Predicting the taxi tips in New York

Keywords: R, Data Wrangling, Regression, Data Visualization, GIS

- Preprocessed millions of rows of [taxi](#) data from Taxi & Limousine Commission.
- Performed exploratory analysis using various visualization techniques from ggplot2 and leaflet.
- Performed regression analysis on how tip amount is affected.

Course project | PCA and Kernel PCA for Wine Variety Analysis

Keywords: R, PCA, Kernel PCA, Classification, Data Analysis

- Investigated the application of PCA and kernel PCA in analyzing the [wine](#) dataset.
- Compared the performance of standard PCA and various kernel PCA methods, considering classification accuracy and the number of principal components.
- Determined the most suitable approach for the dataset.
- [Here](#) is the project report.

Community projects | The 15th Dreamworks Singing Competition

Keywords: Project Management, Communication

- Held in ASB Waterfront Theatre by the New Zealand Chinese Student Association in 2018.
- Team director for the 'Tiger Broker' team, facilitated communications between the production team, the singers, and the sponsors.