

# Charlotte Xu

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## EXPERIENCE

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### Statistics and Mathematics Tutor

Feb. 2020 - Oct. 2024

University of Canterbury | Christchurch, New Zealand + Remote

Worked as a head tutor in the statistics track and then later as a private tutor. Led students through STAT101 (Introduction to Statistics), STAT202 (Regression Modelling), STAT213 (Statistical Inference), and general mathematics. Continued to teach private clients remotely after graduating in 2021 on a part-time basis, and moved to full-time work in late 2023.

#### Key Responsibilities:

- Worked with professors to inform the curriculum and assignments for students.
- Lead tutorial sessions with students and revised problem set questions in class through visual and kinesthetic based teaching methods.
- Taught one-on-one sessions with students in need of additional learning support.
- Kept up to date with the latest pedagogical literature and evidence-based teaching methods.

### Actuarial Pricing Analyst

Oct. 2022 - Jul. 2023

IAG | Wellington, New Zealand

Managed insurance pricing reviews and stakeholder presentations to ensure technical pricing pushed profitability across the key insurance products. Published several high level reports to inform portfolio managers of pricing weaknesses and critical risks.

#### Key Responsibilities:

- Created statistical models and conducted statistical inference to determine appropriate statistical pricing factors.
- Managed presentations to stakeholders and portfolio managers to ensure risk analysis is communicated in a clear way.

### Statistical Research Assistant

Jun. 2021 - Sep. 2022

University of Canterbury | Christchurch, New Zealand

Provided statistical support for multiple projects, including a Monte-Carlo simulation study on insurer insolvency under perfect competition. Some of my resulting work has been published in the [UC Business School Working Paper Series](#) and other projects still ongoing.

#### Key Responsibilities:

- Turned the conceptual model designs into a working python model.
- Worked with other researchers to analyse and interpret model outputs.

### Data Analyst & Coach

Feb. 2021 - May 2021

Te Arawa Whānau Ora | Rotorua, New Zealand

Led learning sessions with indigenous social leaders to help them understand key statistical concepts and database management. Also responsible for overall upkeep and management of the Whānau Tahi database ecosystem.

#### Key Responsibilities:

- Worked with learners to design curriculums and goals for learning sessions.
- Conducted teaching sessions with a focus on visual, kinesthetic, and culturally aware learning.
- Extracted requested database information for quarterly reporting and analysis.

## EDUCATION

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**Bachelor of Science in Statistics** | University of Canterbury

Graduated Dec. 2020

Overall GPA: 6.70 (NZ); 3.39 (USA)

Major GPA: 7.17 (NZ); 3.53 (USA)

- *Recipient*, UC International First Year Scholarship; *Volunteer*, Language & Culture Exchange Program
- *Main Courses*: Bayesian Inference (A), Statistical Inference (A+), Computational Statistics (A)

## TEACHING

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**Taught advanced statistics and mathematics** at the University of Canterbury | **Taught database system operation and basic statistics** at Te Arawa Whānau Ora | **Taught AP level mathematics and statistics** during private tutoring sessions

## TECHNICAL SKILLS

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R: tidyverse, shiny, mlr, knitr, simplevis | Python: PyMC3, sklearn, numpy, matplotlib | SQL: MySQL, PostgreSQL | Excel