Weihao Li

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Education

Department of Econometrics and Business Statistics, Monash University — *Clayton, Australia*

Doctor of Philosophy — *Mar. 2021 - Mar. 2024*

- PhD research topic is Advances in Artificial Intelligence for Data Visualization: Developing Computer Vision Models to Automate Reading of Data Plots, with Application to Predictive Model Diagnostics

Monash University — *Clayton, Australia*

BCom (Hons) in Econometrics — *Mar. 2020 - Dec. 2020*

- First Class Honours, GPA: 3.9/4.0
- Honours research project was to develop a spatiotemporal clustering algorithm for accurately identifing bushfire ignition locations from satellite hotspot data and a machine learning model for predicting causes of 2019-2020 Victorian bushfires.
- Studied units include collaborative and reproducible practices, Bayesian and frequentist econometrics and exploratory data analysis.

Monash University — *Clayton, Australia*

BCom in Business Analytics — *Mar. 2018 - Nov. 2019*

- High Distinction, GPA: 3.5/4.0
- Studied a variety of units covering different aspects of data analysis include data access, management, cleaning, visualization and modelling.
- Minored in Finance enhanced my investment analysis skills in currency, equity, debt and derivatives markets.

Guangdong University of Finance — *Guangzhou, China*

BFin in Finance — *Sep. 2015 - Jun. 2020*

- GPA: 3.4/4.0
- Studied foundation courses in commerce and finance.

Awards

2021	Monash Graduate Scholarship, Monash University	
2021	Monash International Tuition Scholarship, Monash University	
2020	Dean's Honour, Business School, Monsh University	
2020	Econometrics Honours Memorial Scholarship, Monash University	*$15,000*

Teaching experience

ETC5521 - Exploratory Data Analysis — *Monash University*

Tutor — *2021 S2*

ETC3250/ETC5250 - Introduction to Machine Learning — *Monash University*

Tutor — *2021 S1*

Summer Institute in Statistics for Big Data - Module 4: Visualization of Biomedical Big Data — *University of Washington*

Assistant Instructor — *Jul 21 - 23, 2021*

Research experience

2020 **Using Remote Sensing Data to Understand Fire Ignitions in Victoria during the 2019-2020 Australian Bushfire Season**

Honours degree research project, supervised by Prof Di Cook and Emily Dodwell

Software development

spotoroo: Spatiotemporal Clustering of Satellite Hot Spot Data — *2021*

R package — *Author, Maintainer*

Data analysis projects

Predicting Wikipedia Daily Click Volume *2019*

Deep Learning Project

- Used deep learning to predict the next year daily click volume of a Wikipedia website given the data of the previous 500 days.
- Tested different deep learning architectures include pure Fully Connected neural network, LSTM, GRU and 1D Convolution neural network for this time-series task.
- Tuned Hyperparameters using cross-validated grid-search.
- Prediction performance was much better than ETS and ARIMA in most of the cases.

Predicting How Points End in Tennis *2019*

InClass Kaggle Competition

- Used machine learning algorithms to predict outcome categories of tennis points given 3D coordinates of the ball position and 2D coordinates of the player position throughout a match.
- Applied ensemble learning to aggregate the prediction of several neural networks, XGBoost, CatBoost and Random forests models which are trained independently.
- Top 10 of the private leaderboard.

Modelling And Predicting The Performance Of Portfolios Consisting of ASX200 Stocks *2019*

Financial Econometrics Project

- Used ARIMA-ARCH-type models to predict the log return and volatility of portfolios given the past performance.
- Successfully constructed a hypothetical portfolio with a high Sharpe ratio and passed a 3-months review.

Data Analysis Of Melbourne Airbnb Market *2018*

Data Modelling Project

- Used classical regression models to explore the factors affecting Melbourne Airbnb price and rating.

Volunteer activities

R workshops for Beginners *2019*

Helper

- A series of student ran workshops on data analysis in R.
- Workshop topics include introduction to R, Rstudio and Rmarkdown, data visualization in ggplot2, data types and import data in R, data wrangling with dplyr and handling missing data with naniar.