Mitchell O'Hara-Wild

Data Scientist

Melbourne, Australia

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Current employment

Nectric *Melbourne, Australia*
Data science consultant *Jan. 2019 - Present*
- Data science consulting projects including spatio-temporal modelling, and large scale forecasting.
- Hosting workshops improving data literacy, development, analysis and modelling capabilities.

Monash University *Clayton, Australia*
Research assistant *Oct. 2015 - Present*
- Involved in many internal and external data projects of varying size and complexity.
- Projects typically feature large scale time series modelling or analysis, cross-sectional modelling and creating tools for improving workflows.
- Consulting project clients include: COVID-19 Doherty Institute, Huawei, Monash University, R Consortium, and the NSW Chief Scientist office.
- Developer for The R Journal, producing software for managing submitted articles and publishing them in both interactive HTML and static PDF.

Monash University *Clayton, Australia*
Teaching Associate *Mar. 2016 - Present*
- Sessional teaching of university students undertaking Bachelor's and Master's degrees.

Education

Monash University *Clayton, Australia*
PhD in Econometrics *Feb. 2023 - Present*
- Recipient of the Monash Graduate Excellence Scholarship.
- Research in forecast reconciliation and the design of statistical software for forecasting.

Monash University *Clayton, Australia*
BCom (Hons) in Econometrics *Mar. 2017 - Nov. 2017*
- Recipient of the Econometrics Honours Memorial Scholarship, Dean's Honour, Dean's Commendation, and best in class for 5 units.
- Honours research project was to develop a state space model for quickly forecasting time series with multiple seasonalities.
- Studied units include Bayesian and frequentist econometrics, advanced statistical modelling and computational science.

Monash University *Clayton, Australia*
BCom in Econometrics, BSc in Mathematical statistics and Computational Science *Mar. 2013 - Nov. 2016*
- Recipient of the Monash Community Leaders Scholarship, International Institute of Forecasters Award, and best in class for 4 units.
- Mentor for the Access Monash Ambassador Program (2015 and 2016)
- Participant of the Vice-Chancellor's Ancora Imparo Student Leadership Program (2014)
- Studied a broad range of units covering many aspects of data science. The three disciplines I majored in explored different perspectives for working with data.

Teaching experience

University Tutoring

My teaching quality at Monash University has been consistently recognised with positive student evaluations and individual praise from my students. I generally teach applied forecasting and data analysis skills that give students a practical toolkit for working with data in industry. I have also been awarded nine congratulatory letters for outstanding student evaluations which indicates that the unit's teaching is among the best in the university.

WORKSHOPS AND TRAININGS

In addition to sessional tutoring, I also teach data analysis workshops for industry professionals.

Dec. 2023 **Interactive web applications with Shiny for R**: Instructor (SSA, Online)
Booked out 3-hour online quick-start workshop for the basics of shiny

Oct. 2023 **AFRICAST: Tidy forecasting for social good**: Instructor (F4SG, Online)
Five day workshop on forecasting for 62 students from 9 Sub-Saharan African countries.

Jul. 2023 **Tidy Time Series and Forecasting in R**: Instructor (NYR, USA)
Two day workshop on forecasting using tidy forecasting tools in R.

Dec. 2022 **Interactive web applications with Shiny**: Instructor (WOMBAT, Australia)
Half-day workshop on the basics of shiny applications.

Jan. 2020 **Tidy Time Series and Forecasting in R**: Teaching assistant (rstudio::conf, USA)
Two day workshop with Rob Hyndman on forecasting using tidyverse workflows.

Nov. 2019 **Interactive documents with Shiny**: Instructor (CSIRO, Australia)
Two day intermediate workshop on developing of shiny applications.

Sep. 2019 **Data Wrangling**: Instructor (Monash University, Australia)
A short workshop in the 'R Workshops for Beginners' series on using tidyr and dplyr to wrangle data.

Jul. 2019 **Tidyverse developer day**: Helper (RStudio, France)
A one day developer day where I helped R users resolve issues on tidyverse packages.

Aug. 2019 **High-dimensional time series analysis**: Teaching assistant (ISI WSC, Malaysia)
One day short course with Rob Hyndman for analysing and forecasting large collections of time series.

Research output

SOFTWARE

My primary research output is the translation of academic research into open source software packages. In total I have been the lead developer or a substantial contributor to more than 20 open source R packages, many of which provide tools for analysing time series data and visualisations. This software has a significant impact to the industry, with the total average unique monthly downloads exceeding 100,000.

PRESENTATIONS

2023 **Creating flexible e-learning quizzes with literate programming**: Using literate programming to create Moodle quizzes
`https://slides.mitchelloharawild.com/moodlequiz/`

2023 **From forecast to fable, design decisions for statistical software**: A comparison of the design differences between forecast and fable.
`https://slides.mitchelloharawild.com/nyr2023/`

2023 **Reconciliation of structured time series forecasts with graphs**: Reconciling forecasts with graph constraints.
`https://slides.mitchelloharawild.com/reconciling-graphs/`

2023 **The design of statistical software**: Discussion about design principles of user interfaces for statistics.
`https://slides.mitchelloharawild.com/statistical-software-design/`

2020 **Forecasting with multiple seasonality**: Methods and techniques to multiple seasonal forecasting in R
`https://slides.mitchelloharawild.com/nhs2020/`

2020 **Probabilistic cross-temporal hierarchies**: Recent developments of temporal reconciliation in fable.
`https://slides.mitchelloharawild.com/isf2020/`

2019 **Flexible futures for fable functionality**: Gradual introduction to tidy forecasting with fable. Flexibility is demonstrated with combination modelling and package extensibilitiy.
`https://slides.mitchelloharawild.com/fable-tfeam/`

2019 **Flexible futures for fable functionality**: Reconciled forecasting of many time series with model combinations.
`https://slides.mitchelloharawild.com/isf2019/`

2018 **Tidy forecasting in R**: Discussion of recent developments to the fable framework.
`https://slides.mitchelloharawild.com/fable-tfeam/`

2018 **Forecasting multiple seasonality with state switching**: The FASSTER model with the fable framework.
`https://slides.mitchelloharawild.com/user2018`

2017 **Models for forecasting multiple seasonality**: An introduction to the FASSTER model.
`https://slides.mitchelloharawild.com/melburn17/`

Publications

1.   Athanasopoulos, G., Hyndman, R. J., Kourentzes, N., & O'Hara-Wild, M. (2022). Probabilistic forecasts using expert judgment: The road to recovery from COVID-19. *Journal of Travel Research*. `https://doi.org/10.1177/00472875211059240`

Awards & Achievements

Awards

2023	Student Presentation Award	*ISF*
2021	Dean's Citation for Outstanding Contribution to Student Learning as a Teaching Associate	*Monash*
2017	Commerce Dean's Honour	*Monash*
2016	Commerce Dean's Commendation	*Monash*
2014-2016	Science Dean's List	*Monash*
2014	International Institute of Forecasters Award	*IIF*
2013	Rotary Youth Leadership Award	*Rotary*

Scholarships

2023 - 2026	Monash Graduate Excellence Scholarship	*Monash*
2023 - 2026	Monash Faculty Scholarship	*Monash*
2023 - 2026	Monash Departmental Scholarship	*Monash*
2017	Econometrics Honours Memorial Scholarship	*Monash*
2015 & 2016	Monash Community Leaders Scholarship	*Monash*
2011 & 2012	Mitcham Rotary Scholarship	*Rotary*