# Jeesung Ahn

Psychologist | Neuroscientist | Researcher

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## Education

**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

2022 S1 **ETC3550/ETC5550**: Applied forecasting (Monash Clayton)
2021 S2 **ETC5523**: Communicating with Data (Monash Clayton)
2021 S1 **ETC3550/ETC5550**: Applied forecasting (Monash Clayton)
2020 S2 **ETC5523**: Communicating with Data (Monash Clayton)
2020 S1 **ETC3550/ETC5550**: Applied forecasting (Monash Clayton)
2019 S2 **ETC3580**: Advanced statistical modelling (Monash Clayton)
2019 S2 **ETC1010**: Data modelling and computing (Monash Clayton)
2019 S1 **ETC1010**: Data modelling and computing (Monash Clayton)
2019 S1 **ETC3550/ETC5550**: Applied forecasting for business and economics (Monash Clayton)
2018 S2 **ETC1010**: Data modelling and computing (Monash Clayton)
2018 S2 **ETC3580**: Advanced statistical modelling (Monash Clayton)
2018 S1 **ETF3231/ETF5231**: Business forecasting (Monash Caulfield)
2017 S2 **ETC1010**: Data modelling and computing (Monash Clayton)
2017 S1 **ETF3231/ETF5231**: Business forecasting (Monash Caulfield)
2016 S2 **ETF2700**: Mathematics for business (Monash Caulfield)
2016 S1 **ETF3231/ETF5231**: Business forecasting (Monash Caulfield)

### Industry Workshops

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.

Mar. 2019 **The grammar of animation**: Instructor (Monash University, Australia)
A short workshop for NUMBAT group on creating animated graphics in R with the gganimate package.

Dec. 2016 **Master R Developer Workshop**: Teaching assistant (RStudio, Australia)
A two day workshop with Hadley Wicham on programming with R and developing R packages.

## Research output

### Software

My primary research output is the translation of academic research into open source software packages.

2022 **gghdr**: Author
Extends ggplot2 with plot types for visualising highest density regions.

2020 **distributional**: Lead developer
Vectorised distribution objects with methods for manipulating and computing on probability distributions.

2019 **fable**: Lead developer
A collection of time series models for use in a tidyverse workflow.

2019 **fable.prophet**: Lead developer
Extension package implementing the prophet forecasting procedure for fable.

2019 **feasts**: Lead developer
A collection of features, decompositions, statistics and graphics tools for the analysing tidy time series data.

2019 **fabletools**: Lead developer
Provides common utilities for the fable forecasting framework, allows users to extend fable with new models.

2019 **tsibbledata**: Lead developer
Diverse datasets in a tidy time series data structure (tsibble). Useful in examples of tidy time series analysis.

2019 **tsfeatures**: Author
Various methods for extracting features from time series data.

2018 **tsibble**: Contributor
Tidy temporal data structures and tools. The data for the tidy time series collection of packages.

2018 **vitae**: Lead developer
Dynamically generate a Résumé or CV using R Markdown. This CV is created using code with that package!

2018 **cransays**: Author
Provides a dashboard and historical data for R packages being reviewed by CRAN.

2017 **fasster**: Lead developer
Implementation of the FASSTER model for forecasting complex multiple seasonal patterns.

2017 **icons**: Lead developer
Embed SVG icons in R documents such as slides, reports and apps.

2018 **taipan**: Lead developer
Generates shiny apps for annotating image data, which is useful for training machine learning models.

2017 **ggquiver**: Lead developer
Extends ggplot2 for displaying vector fields on plots.

2015 **forecast**: Author
Methods and tools analysing univariate time series data and producing model-based forecasts.

### Presentations

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|---|---|
| 2020 | **Forecasting with multiple seasonality**: Methods and techniques to multiple seasonal forecasting in R<br>`https://slides.mitchelloharawild.com/nhs2020/` |
| 2020 | **Probabilistic cross-temporal hierarchies**: Recent developments of temporal reconciliation in fable.<br>`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.<br>`https://slides.mitchelloharawild.com/fable-tfeam/` |
| 2019 | **Flexible futures for fable functionality**: Reconciled forecasting of many time series with model combinations.<br>`https://slides.mitchelloharawild.com/isf2019/` |
| 2018 | **Tidy forecasting in R**: Discussion of recent developments to the fable framework.<br>`https://slides.mitchelloharawild.com/fable-tfeam/` |
| 2018 | **Forecasting multiple seasonality with state switching**: The FASSTER model with the fable framework.<br>`https://slides.mitchelloharawild.com/user2018` |
| 2017 | **Models for forecasting multiple seasonality**: An introduction to the FASSTER model.<br>`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

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|---|---|---|
| 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

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|---|---|---|
| 2017 | Econometrics Honours Memorial Scholarship | *Monash* |
| 2015 & 2016 | Monash Community Leaders Scholarship | *Monash* |
| 2011 & 2012 | Mitcham Rotary Scholarship | *Rotary* |

### Competitions

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| 2018 | UseR! 2018 Datathon Champion | *UseR!* |
| 2017 | RMIT SBITL Analytics Competition Champion | *RMIT* |
| 2016 | RMIT SBITL Analytics Competition Champion | *RMIT* |