Marcellin Martinie

Aspiring data scientist

Personal details

Date of Birth:	22 November 1993
Email:	marcellin.martinie@gmail.com
Phone:	+61 (0) 452 488 766
LinkedIn:	https://www.linkedin.com/in/marcellin-martinie/

Education

2016 - 2020	PhD in Psychology, The University of Melbourne
	Contemporary Methods for Identifying and Leveraging Expertise in Collective Decision-Making. [pdf]
2012 - 2015	BSc. (Hons) in Psychology, The University of Melbourne (First Class Honours)

Certifications

- Machine Learning - Course Certificate, Stanford University / Coursera, Jan 2022

  This course provided a broad introduction to machine learning topics including: (i) Supervised learning (parametric/non-parametric algorithms, support vector machines, kernels, neural networks); (ii) Unsupervised learning (clustering, dimensionality reduction, recommender systems, deep learning); and (iii) Best practices in machine learning (bias/variance theory; innovation process in machine learning and AI).

Employment

Forethought Research:

2021 - Present	<u>Marketing Science Analyst</u>
	Key contributions in this role included data cleaning, preparation, and validation of complex quantitative datasets; interrogation and interpretation of analytical findings against clients' commercial objectives; and playing a lead role in the development of the team's new analytics dashboard platform.

The University of Melbourne:

2016 - 2020	<u>Tutor in Research Methods for Human Inquiry</u> (PSYC30013)
	Teaching fundamentals in data analysis and statistics in R, key topics included coding, data processing, visualisation, regression and GLMs.
2019 - 2019	<u>Tutor in Advanced Design and Data Analysis</u> (PSYC40005)
2016 - 2017	<u>Tutor in Cognitive Psychology</u> (PSYC20007)

Project Highlights

(1) Developing the Forethought Analytics platform (2021 - Present)

Forethought's Data and Analytics (DnA) platform integrates all major ETL and analytics functionality into a dashboard interface that is simple to use and requires little to no coding knowledge. Leveraging my expertise in R shiny, I played a lead role in developing the key features of the platform, including:

- implementing ETL procedures, extracting from and saving to SQL databases

- data cleaning modules (e.g., transformation, weighting, and variable creation)

- data visualisation modules (e.g., k-means plots, gap analysis matrices, pivot tables)

- modeling modules (e.g., GLMs, elastic net)

- developing the company's core analytics packages (using devtools, golem)

- testing procedures (unit, snapshot, and server load testing)

- building virtual images & containers to host the analytics platform via Docker

- formalising and documenting workflow procedures and version control (e.g., Gitflow)

Key skills: R (tidyverse, shiny), SQL, Docker, Linux, Git

(2) Estimating the Supply and Demand for Data Scientists (2020)

Contracted by Keypath Education to investigate the supply and demand for Data Scientists in Australia, I used Selenium and Python to scrape thousands of publicly available job advertisements on job websites such as Seek and CareerOne, and used Natural Language Processing in R to analyse the content of those ads. I found a much greater demand for Data Scientists in the Australian job market compared to similar professions in the category.

Key skills: R, Python, NLP, RegEx, HTML

Technical skills

Advanced:

R, MATLAB, LaTeX, Qualtrics, SPSS, Microsoft Office

Basic:

Python, SQL, HTML, JavaScript, Markdown, Linux

Research papers

1. Martinie, M., Wilkening, T., & Howe, P.D. (2020). Using meta-predictions to identify experts in the crowd when past performance is unknown. *Plos One*, *15*(4), e0232058. [pdf]

2. Wilkening, T., Martinie, M., & Howe, P.D. (2020). Hidden experts in the crowd: using meta-predictions to leverage expertise in single-question prediction problems. *Management Science.* Advance online publication. doi.org/10.1287/mnsc.2020.3919 [pdf]

3. Martinie, M., Wilkening, T., & Howe, P.D. (2021). Identifying and extracting expertise from individuals' performance in unrelated domains. Manuscript under review. [pdf]

Conference presentations and invited talks

- Australian Mathematical Psychology Conference, Melbourne, Feb 2019

- Australian Experimental Psychology Conference, Hobart, Apr 2018

- Australian Experimental Psychology Conference, Newcastle, Apr 2017

- Australian Experimental Psychology Conference, Melbourne, Apr 2016

- Australian Mathematical Psychology Conference, Hobart, Feb 2016

- Centre of Excellence for Biosecurity Risk Analysis, University of Melbourne, May 2016

Awards

- Best Student Presentation Award - Australian Experimental Psychology Conference, 2018

  The Experimental Psychology Conference is an annual forum for Australasian and international researchers in experimental psychology to share their research. Each year a handful of student presenters are selected to receive this prestigious prize, which recognises the quality of their research and presentation.

- 1st Place Award - Melbourne Datathon Insights Competition, 2018

  Myself and 3 teammates were awarded 1st place in the 2018 Melbourne Datathon Competition. The Melbourne Datathon is a yearly data science competition where teams are provided with a previously unseen dataset and are tasked with coming up with meaningful, easily understandable and actionable insights from the data. The competition in 2018 attracted over 190 teams, and required cleaning, analysing, and generating insights from over 1.88 billion rows of raw touch-on and touch-off Myki data on the Victorian public transport system. Winners were selected after pitching their insights in front of a large audience and panel of industry judges at NAB Arena.

Referees

1. Karen Hansen (Manager)
   General Manager of Marketing Science & Principal Analyst, Forethought Research
   Email: karen.hansen@forethought.com.au

2. Stewart Warren (DnA Initiative Team Leader)
   Principal Analyst, Forethought Research
   Email: stewart.warren@forethought.com.au

3. Piers Howe (PhD Supervisor)
   A/Prof, Melbourne School of Psychological Sciences, The University of Melbourne
   Email: pdhowe@unimelb.edu.au