



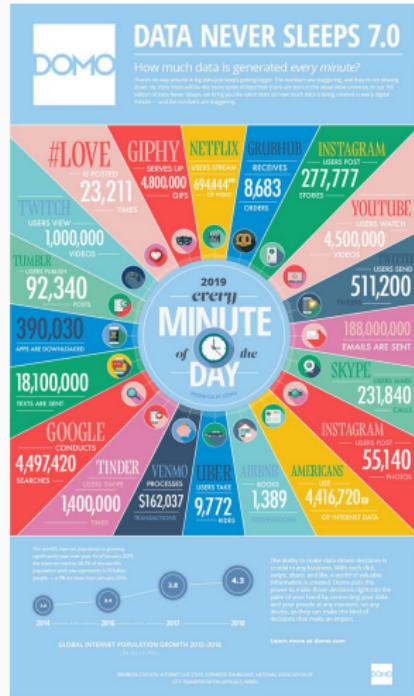
# Master of Business Analytics: MBAT

Dr Patricia Menéndez, Lecturer MBAT

<https://www.monash.edu/business/master-of-business-analytics>

# Data is collected everywhere and at any time

The ability to make data-driven decisions is crucial to any business.



# Why Business Analytics?

**Industries and governments need to make:**

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- Facts are measured with data 
- Business analytics experts use statistical and computational methods to answer business relevant questions using data 
- Business analytic professionals are able to communicate findings to experts and broad audiences 

# Master of Business Analytics -> Starting 2020

- Learn end-to-end analytics including data collection, modeling, collaboration & communication
- Broad foundation: statistical thinking, probabilistic modeling & computational techniques
- Social conscience, working for a better world



Know what you are doing! **EBS, Monash University**

# Top jobs under the “4th Industrial revolution”

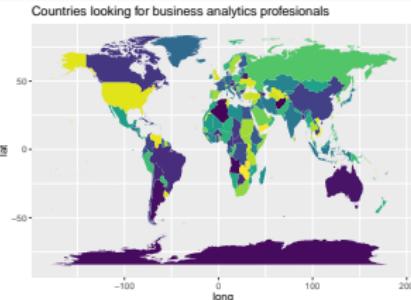
Business analytics  
Visualization  
**R** Computational statistics  
Decision making  
Data Statistics Modelling  
Communicating with data

- ① Data Scientists 19% ↑
- ② Statistician 33% ↑
- ➔ Interesting jobs

## Data is driving the 4th Industrial Revolution

# Countries looking for MBAT graduates

- ↑ Increasing demand for Business Analytics graduates
  - Worldwide!



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- ✓ Business analytics professionals are/will play a major role in decision making **with Jobs @**
  - Industry
  - Government
  - University

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- Fiercely independent → only use open-source software.

# Monash MBAT is



R

**The only masters course in the world based entirely around R and taught by leading R developers.**

- The **leading statistical programming** framework.
- Completely free and **open-source**.
- Used by **every major company in the world**.
- Supported by **Microsoft, Google, Facebook, Amazon, etc.**
- Rob Hyndman wrote the main forecasting tools.
- Di Cook is a member of the R foundation.
- The leading R developers visit Monash regularly.

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- An **interest** in using **data** to solve problems and uncover truths.
- A combination of **curiosity in quantitative and computational methods** with a **desire** to make a difference.
- An **undergraduate degree** that has sparked your interest to work with data to answer real life questions.

# Units -> Advanced Preparatory Studies

## (A) Advanced preparatory studies (24 credit points)

- ETC5510: Introduction to data analysis
- ETC5242: Statistical thinking
- ETC5250 Introduction to machine learning
- ETC5550 Applied forecasting

→ Depending on prior qualifications -> credits might be received for (A)

→ All students will complete (B) and (C)

# Units -> Mastery Knowledge

## (B) Mastery knowledge (48 credit points)

- ETC5512 Wild-caught data
- ETC5513 Collaborative and reproducible practices
- ETC5521 Exploratory data analysis
- ETC5523 Data story-telling
- ETF5500 High dimensional data analysis
- ETC5555 Statistical machine learning
- ETC5580 Advanced statistical modelling
- ETC5543 Business analytics creative activity (12  
→ Internship or research project)

# Units -> Application Studies

## (C) Application studies (24 credit points)

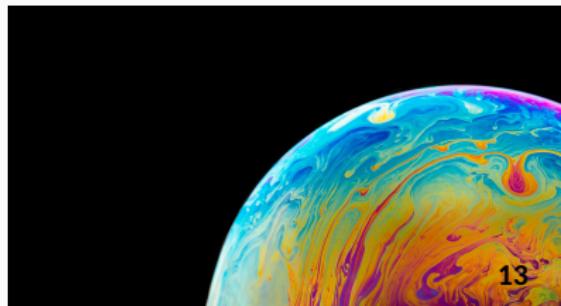
### Four elective units

- FIT9133 Programming foundations in Python
- FIT5205 Data in society
- FIT9132 Introduction to databases
- MAT9004 Mathematical foundations for data science
- ETC5410 Bayesian time series econometrics
- FIT5147 Data exploration and visualisation
- ETC5555 Statistical machine learning
- FIT5212 Data analysis for semi-structured data

# MBAT: A World full of opportunities

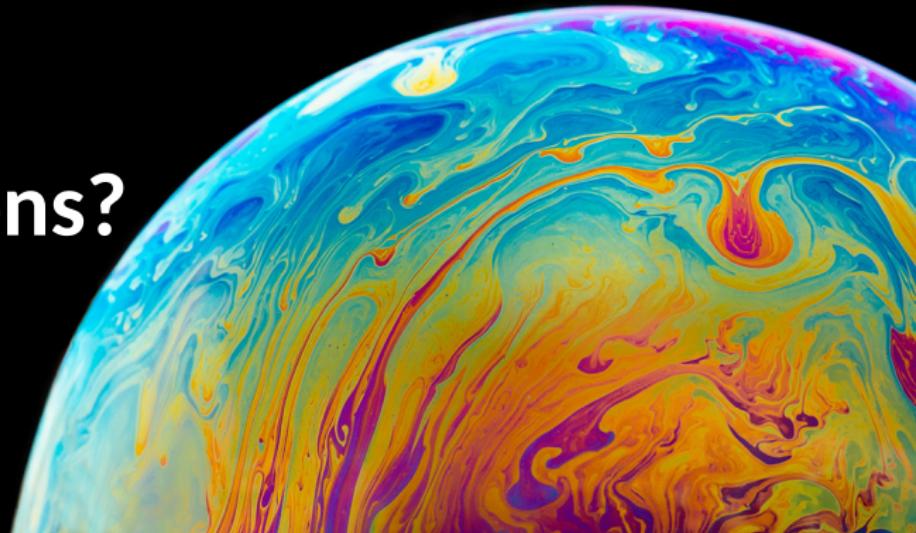
- **Location and duration:** 1.5 or 2 years full time or 3 or 4 years part time @ Monash Clayton.
- **Applications** for our Semester 1 intake (February 2020) are now open (including a candidate statement).
- **Entry requirements:** Australian bachelor's degree or an equivalent qualification with a weighted average mark (WAM) of 65, or equivalent GPA as determined by the School.

- > Highly connected instructors in analytics community
- > Instructors → active researchers
- > Learning cutting edge → latest tools & best established methods



# Many thanks!

## Questions?



All here @Monash, jump in!

<https://www.monash.edu/business/master-of-business-analytics>