Teaching with Tableau

Jac Birt
UWA

THE UNIVERSITY OF
WESTERN
AUSTRALIA

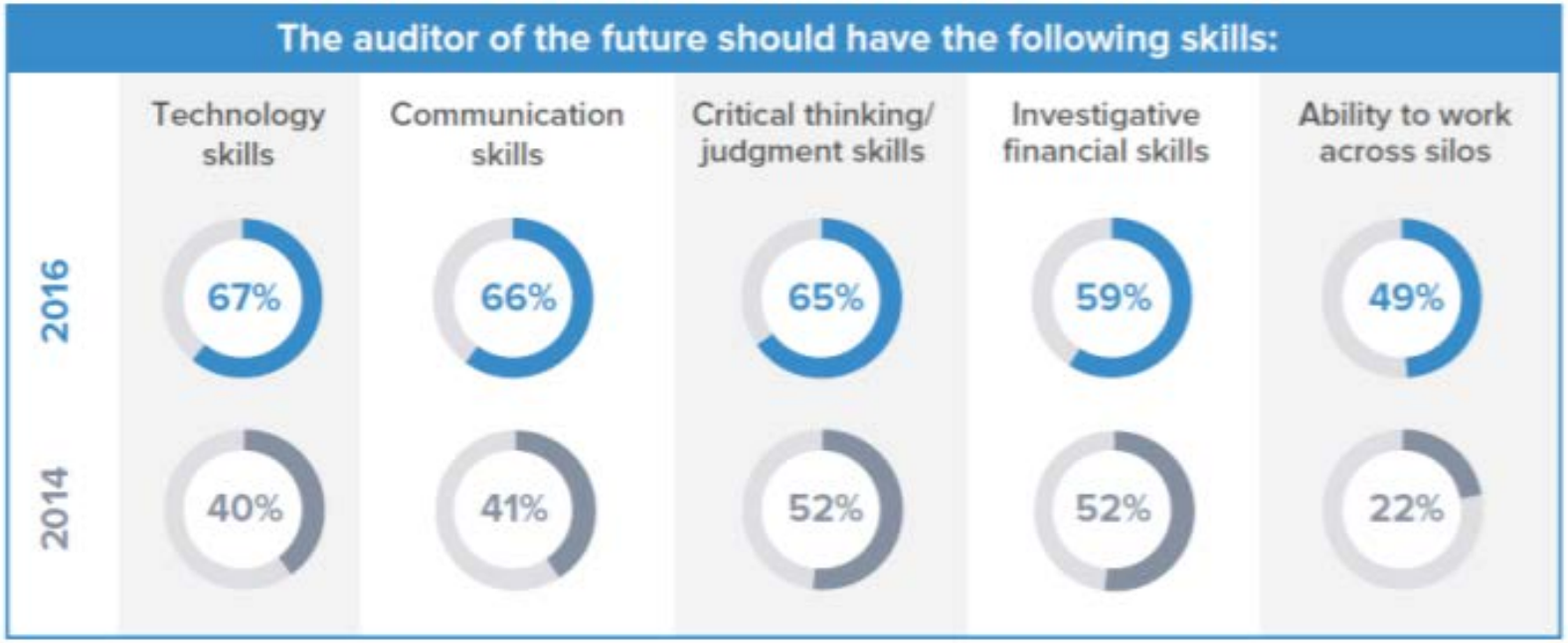
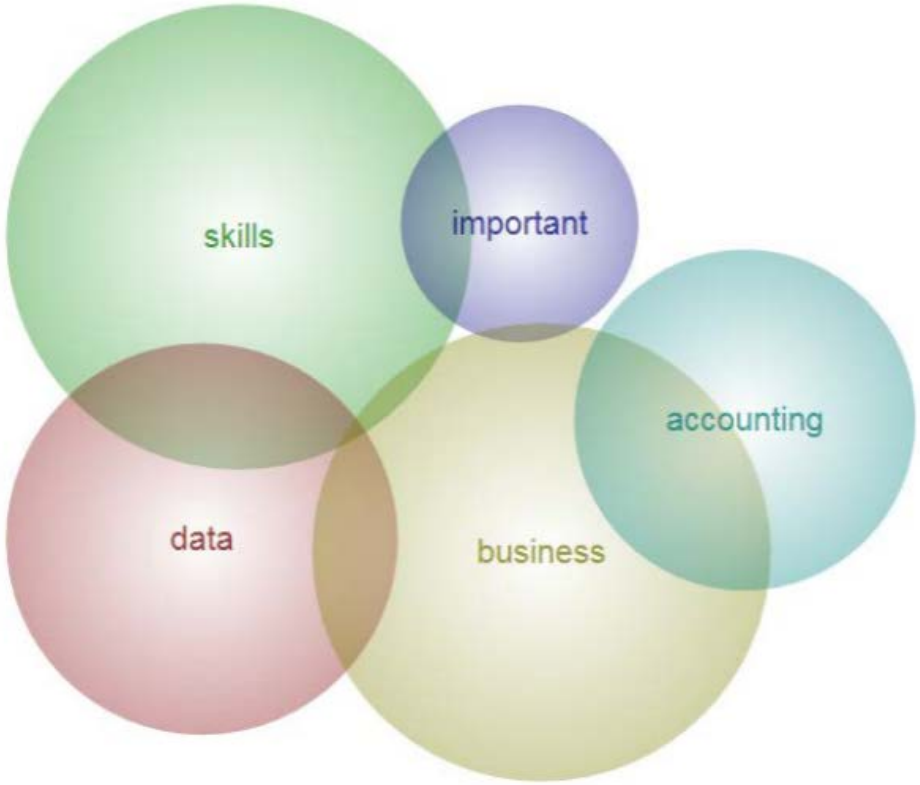


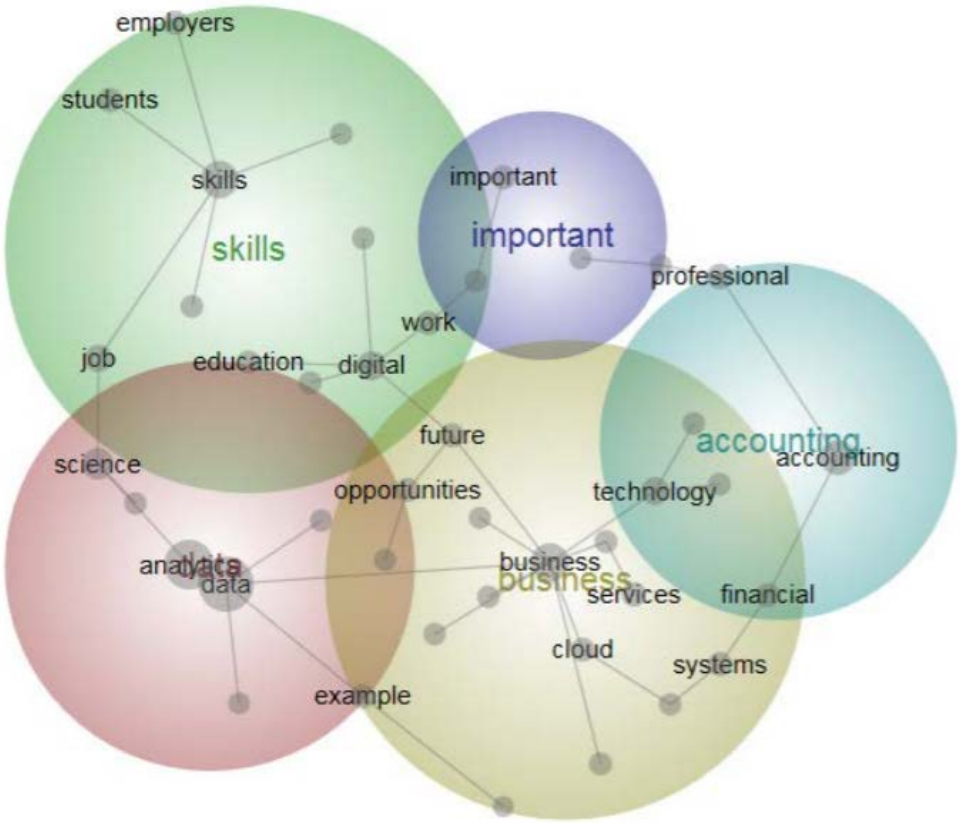
Figure 3.2: Auditors' skills for the future; KPMG (2017, p.11)

Introduction

- IAESB currently identifying how changes in financial reporting are impacting on the ICT skills needed by professional accountants.
- Completed a literature review identifying areas such as big data, data analytics, XBRL, AI and more.
- Identifying ICT skills and gap analysis of such skills in IESs.

Figure 1: ICT main concepts




employers
students
skills
skills
important
important
professional
work
job
education
digital
future
accounting
accounting
science
opportunities
technology
analytics
data
business
business
services
financial
cloud
systems
example

Data analytics

- Accountants use data analytics to help businesses **uncover valuable insights** within financials – **increasing efficiency** and **better managing risk.**
- **E.g. auditors monitoring large data sets, tax accountants use data to look at investment scenarios, behaviour patterns with consumers and markets.**
- 2016 survey **65% of business leaders** believe that data analytics has influenced business in a positive way.
- Accountants have a key advantage as they have **access to financial data** and **understanding** of that data.

Tableau

- Lots of data can’t be analysed in a spreadsheet!
- Can include data from lots of different sources from social media, government websites, customer records, transactional data.
- Tableau helps you understand data, blend, clean, visualise and share dashboards. No programming skills required.

Tableau

- Clean data – remove unwanted rows, rename dimensions/measures
- Blend data from multiple sources.
- Automatic updates – live data
- Data visualisations that change when you need to make changes.
- Geographical maps – Google analytics.
- Variety of graphs
- Seasonal influences
- Forward looking – prediction analytics
- Current and interactive – filtering views, adjusting parameters, performing calculations, drilling down.

Tableau

- **Data visualisation** – graphical depiction of data – dashboard or report.
- Answers question such as “What are our sales and profits for different regions”
- Tell a story about your data.

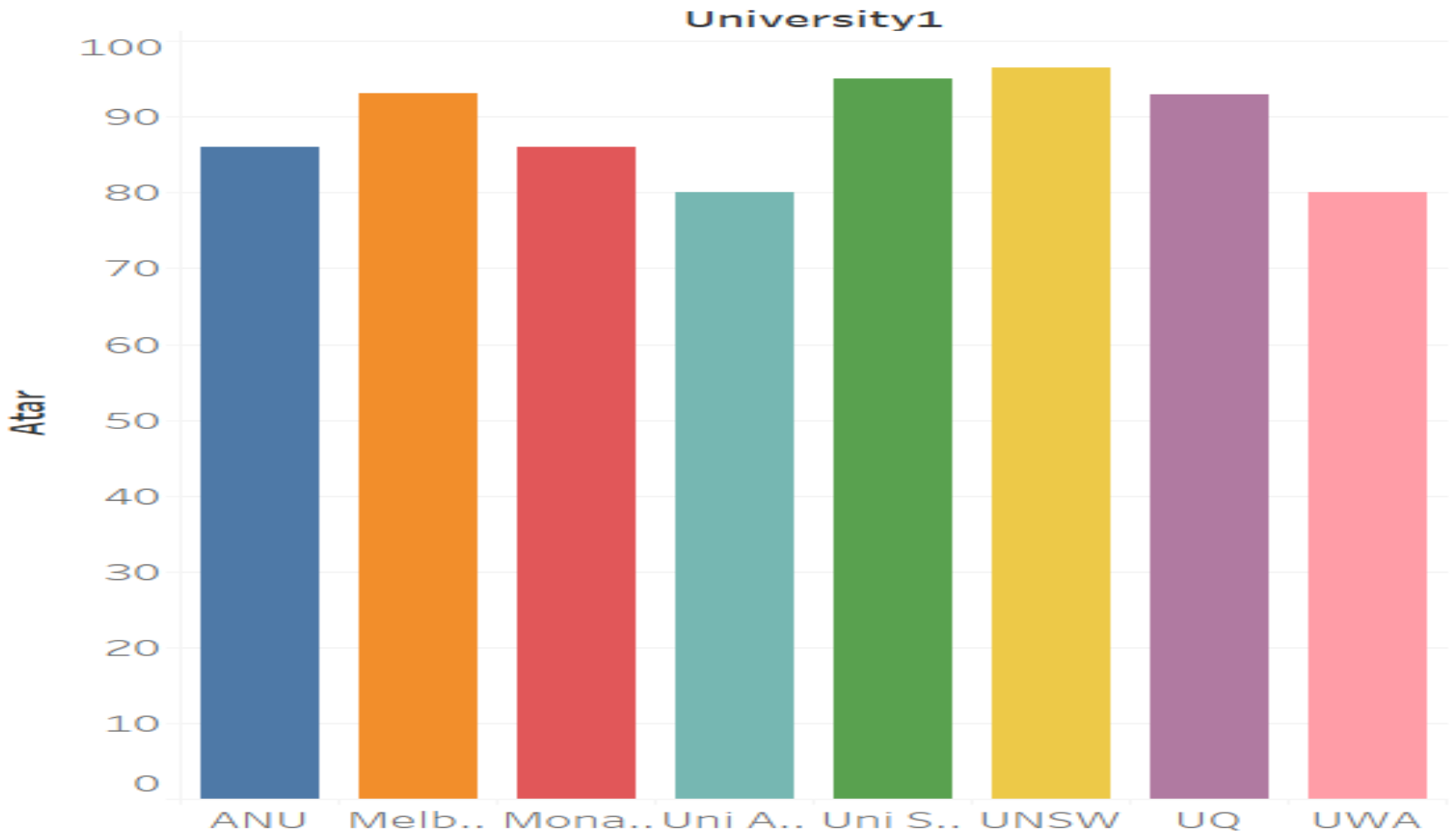
Add files

Group of 8

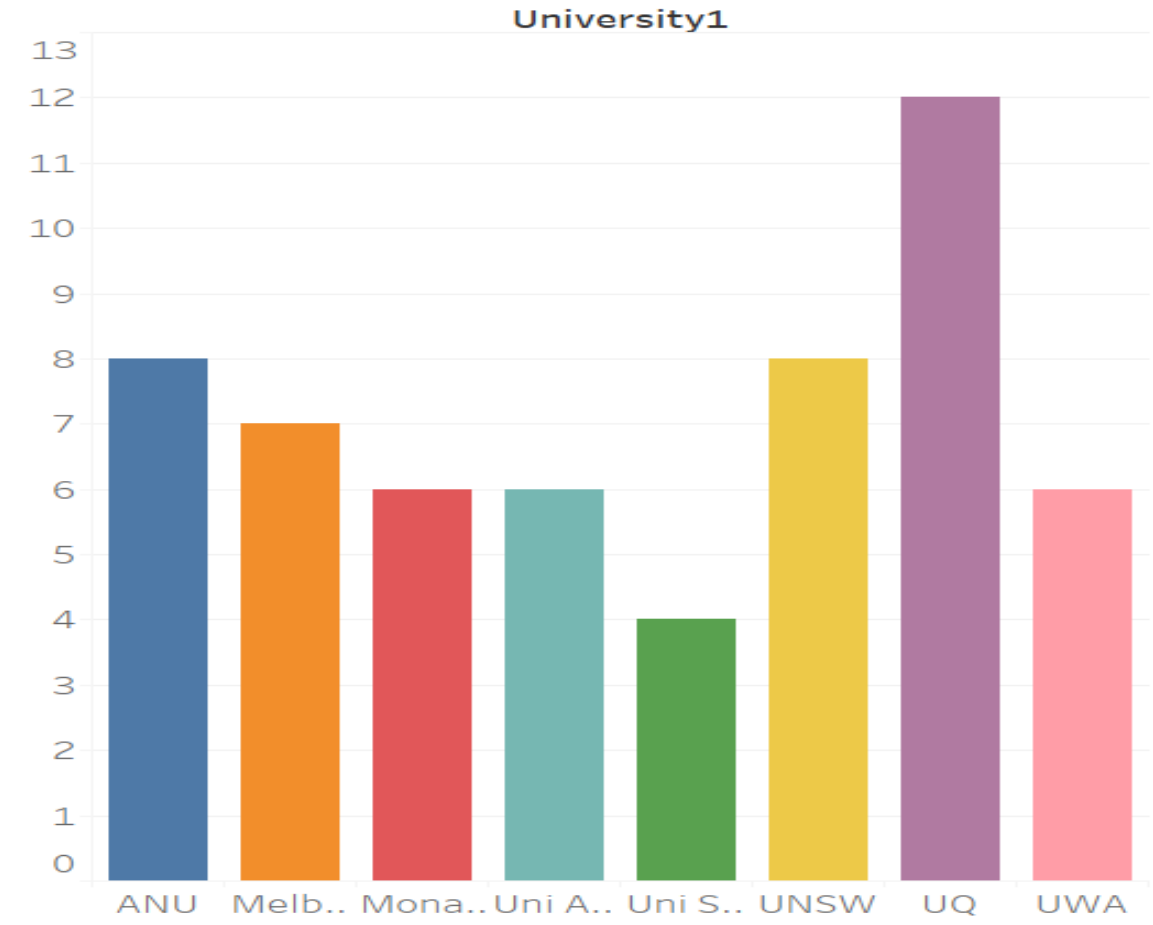
Sort fields | Data source order | Show aliases | Show hidden fields | 8

Group of 8 University	Group of 8 University ...	Group of 8 Atar	Group of 8 ATAR other	Group of 8 Mgt.Mkt	Group of 8 Maths PreR...	Group of 8 Maths appli...	Group of 8 Maths met...	Group of 8 Economics ...	Group of 8 Stats Units	Group of Stats t
University of ...	Western Aust...	80.0000	*null*	1	1	1	0	1	1	Eco an
University of ...	Queensland	93.0000	81.0000	1	1	0	1	2	1	Quant
Monash Univ...	Victoria	90.0000	82.0500	1	1	0	1	1	1	Busine
University of ...	Victoria	93.0500	*null*	0	1	0	1	2	2	Choice
Australian Na...	Australian Ca...	86.0000	87.0000	0	1	0	1	2	1	Quant
University of ...	New South W...	96.5000	93.0000	0	1	0	1	1	1	Busine
University of ...	New South W...	95.0000	98.0000	0	1	0	1	0	1	Quanti

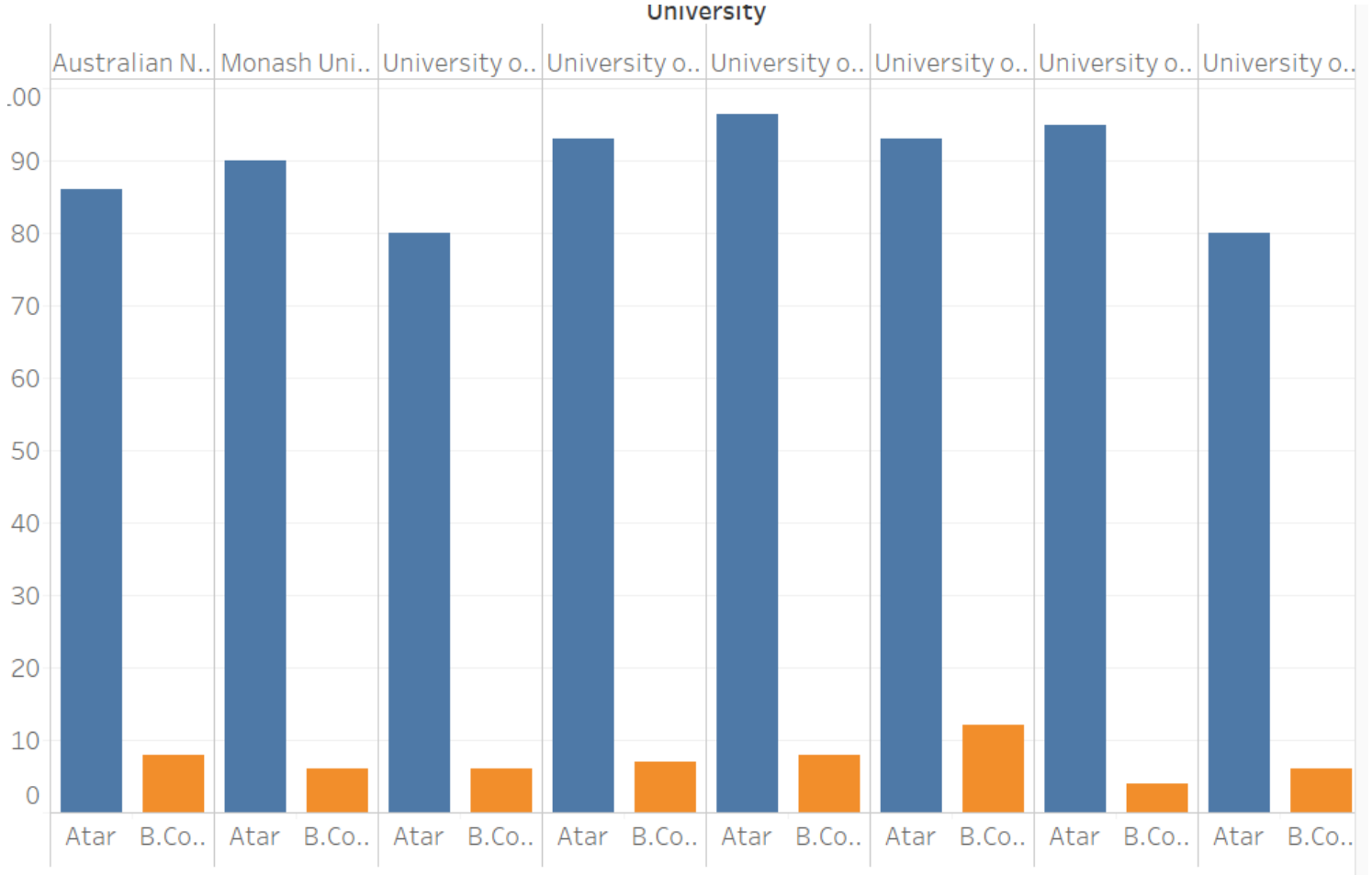
ATARs


University1
Atar
100
90
80
70
60
50
40
30
20
10
0
ANU
Melb..
Mona..
Uni A..
Uni S..
UNSW
UQ
UWA

Core units


University1
13
12
11
10
9
8
7
6
5
4
3
2
1
0
ANU
Melb..
Mona..
Uni A..
Uni S..
UNSW
UQ
UWA

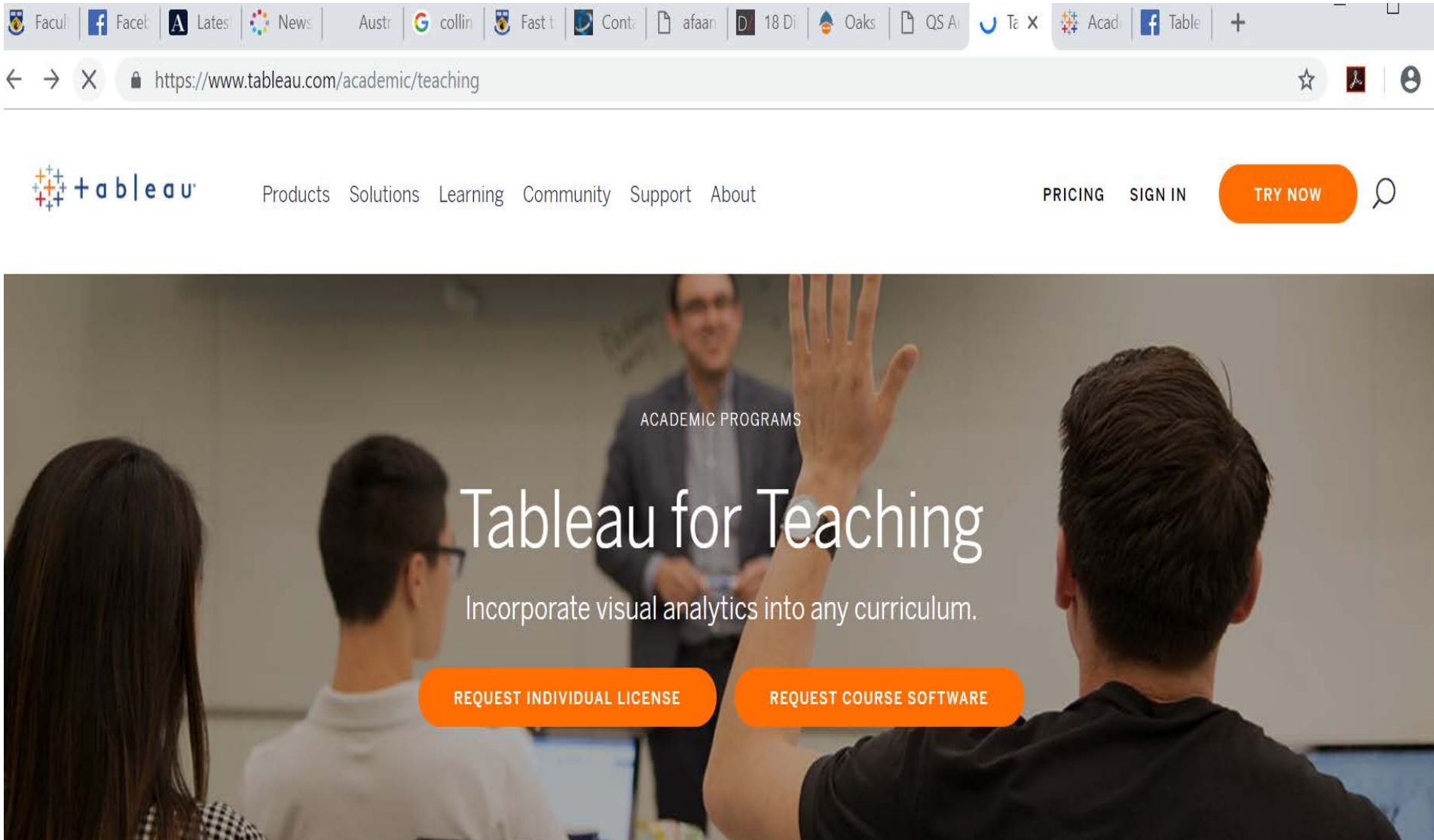
Data visualisation



Tableau

- **Visual analytics –** dynamic, iterative process where you quickly building different views to explore infinite paths of “Whats” and “whys”.
- Can help you explore, find answers and build stories in your data.
- E.g. I need to know why one type of goods is not selling well.
- Change view of the visual.
- Show you the unexpected. Deeper analysis.
- Search for things like outliers, trends and other granular insights.

Tableau case



THE UNIVERSITY OF WESTERN AUSTRALIA

tableau public GALLERY AUTHORS BLOG RESOURCES ACTIVITY SIGN IN

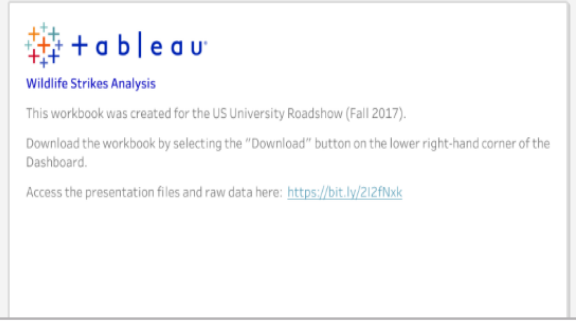
Academic Programs

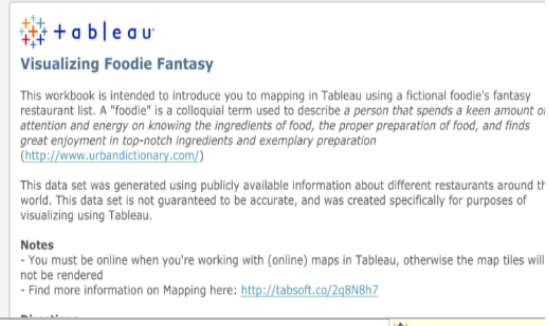
Tableau Software | tableau.com

7 vizzes **143** followers **44** following

Follow More About Me

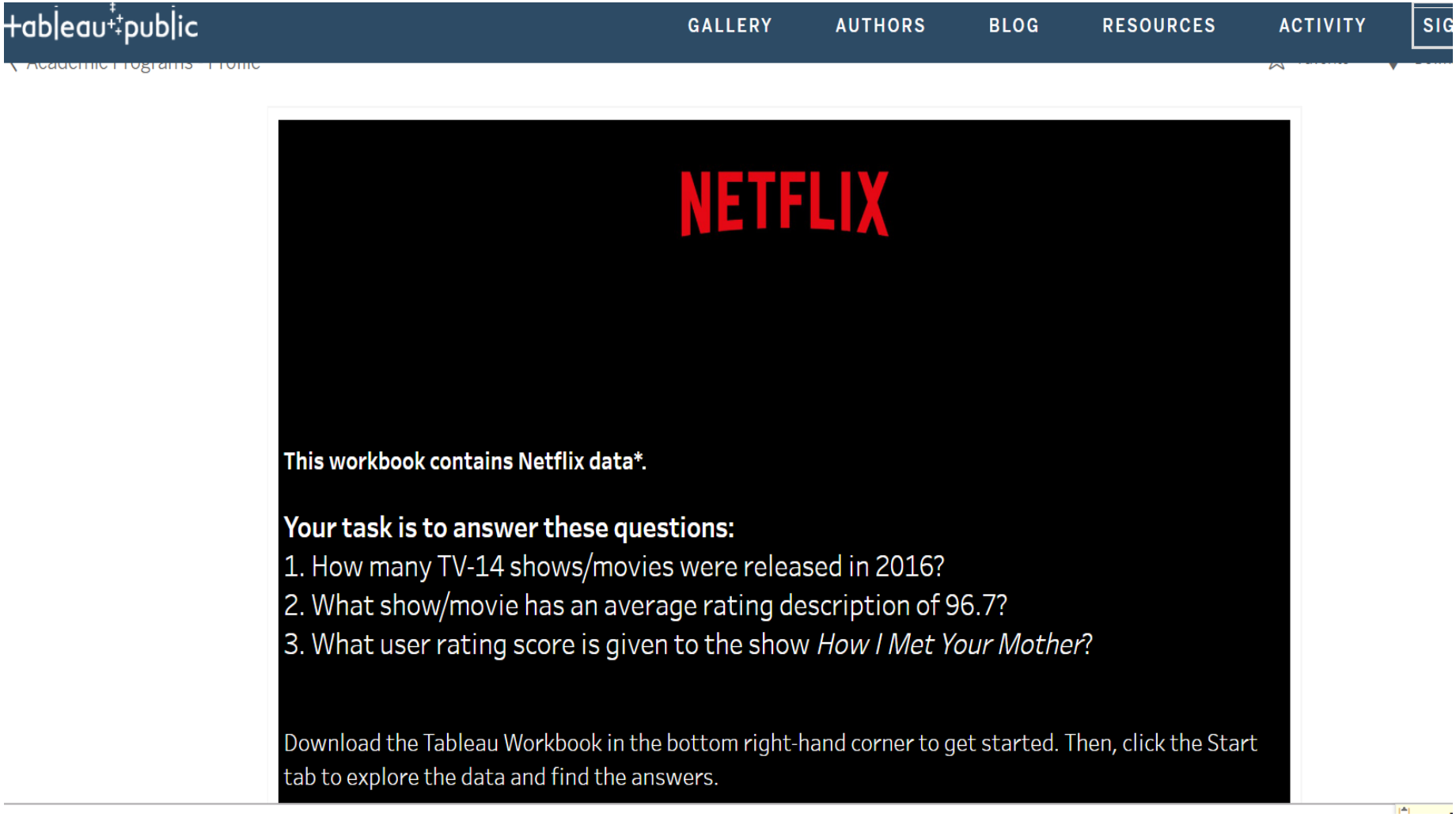
Vizzes 7 Followers 143 Following 44



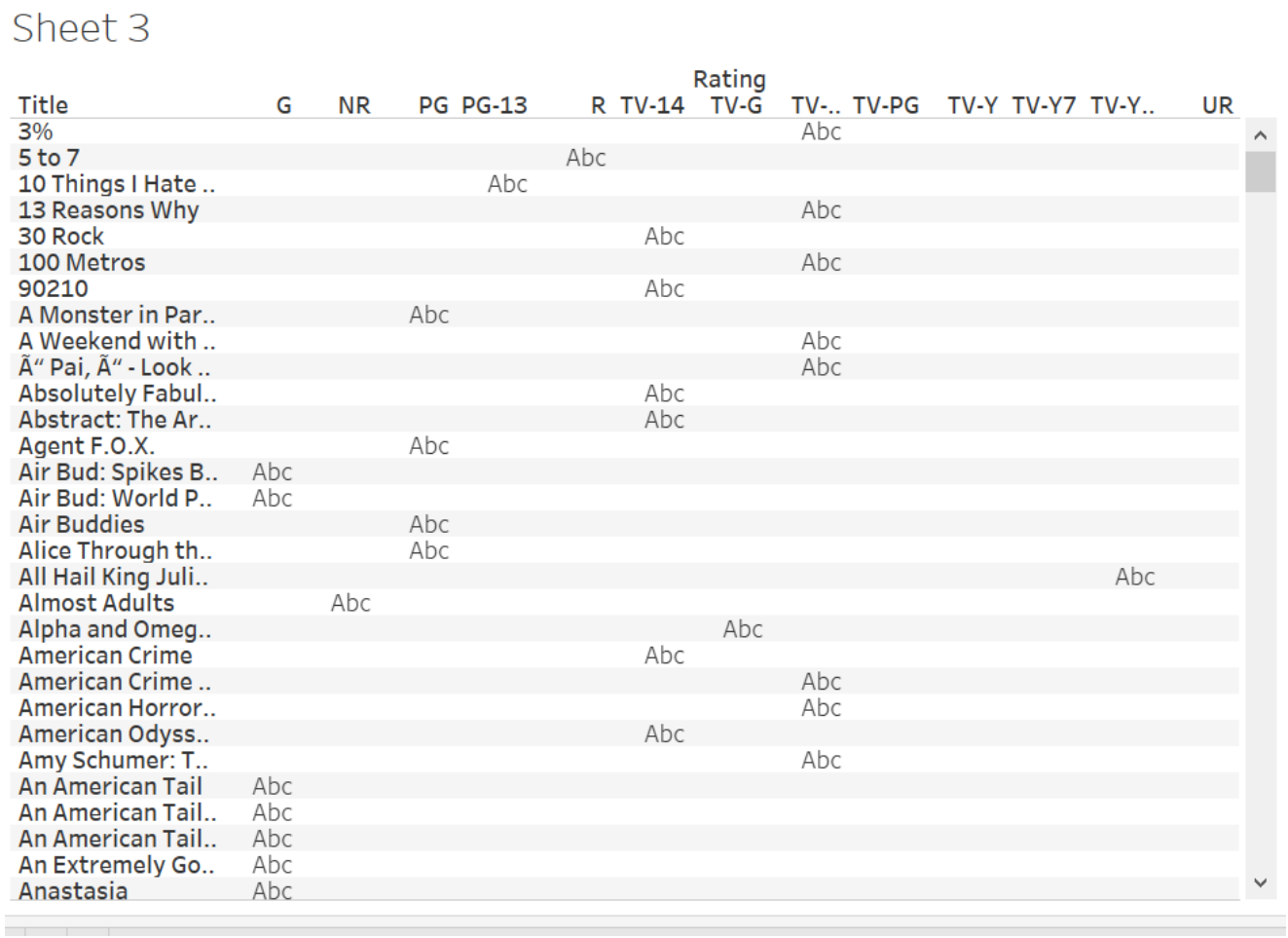


Notflix Student C...twby QS Australia Rank...ht QS Australia Rank...ht 22 of 24 - Clipb

Netflix case



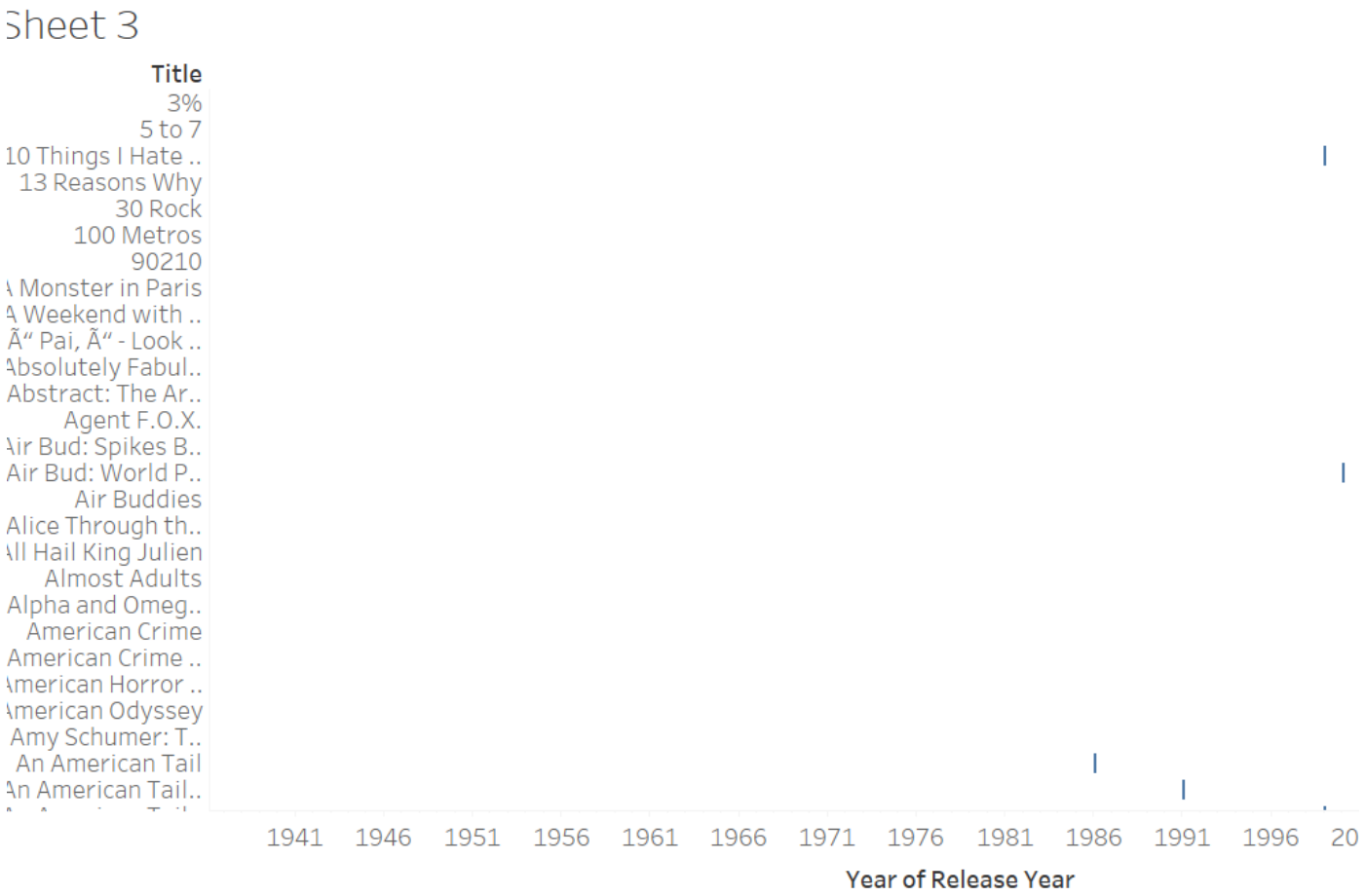
Netflix – title and rating



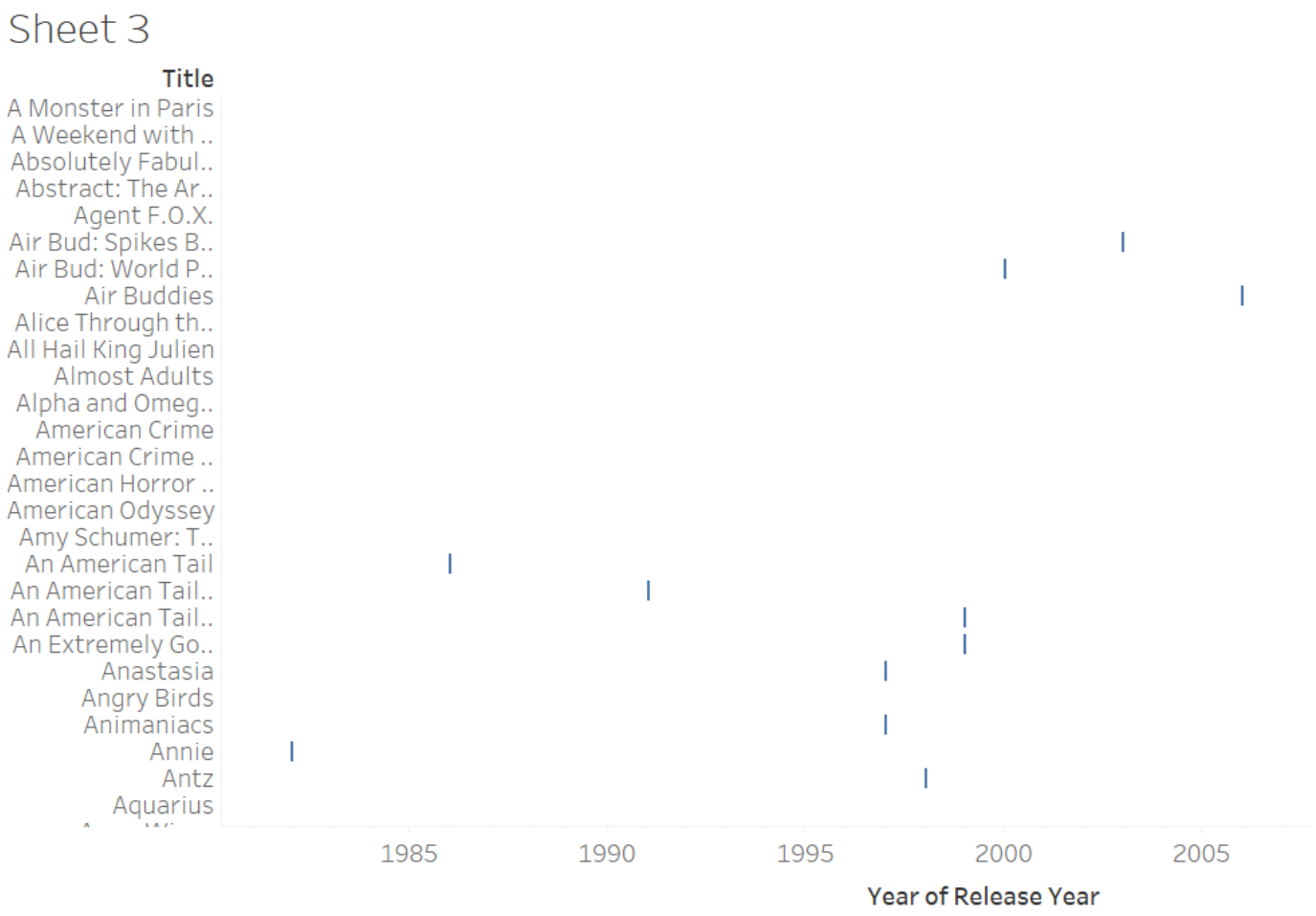
Sheet 3

Title	Rating G	NR	PG	PG-13	R	TV-14	TV-G	TV-..	TV-PG	TV-Y	TV-Y7	TV-Y..	UR
3%								Abc					
5 to 7					Abc								
10 Things I Hate ..				Abc									
13 Reasons Why								Abc					
30 Rock						Abc							
100 Metros								Abc					
90210						Abc							
A Monster in Par..			Abc										
A Weekend with ..								Abc					
Ã“ Pai, Ã“ - Look ..								Abc					
Absolutely Fabul..						Abc							
Abstract: The Ar..						Abc							
Agent F.O.X.			Abc										
Air Bud: Spikes B..	Abc												
Air Bud: World P..	Abc												
Air Buddies			Abc										
Alice Through th..			Abc										
All Hail King Juli..												Abc	
Almost Adults		Abc											
Alpha and Omeg..							Abc						
American Crime						Abc							
American Crime ..								Abc					
American Horror..								Abc					
American Odyss..						Abc							
Amy Schumer: T..								Abc					
An American Tail	Abc												
An American Tail..	Abc												
An American Tail..	Abc												
An Extremely Go..	Abc												
Anastasia	Abc												

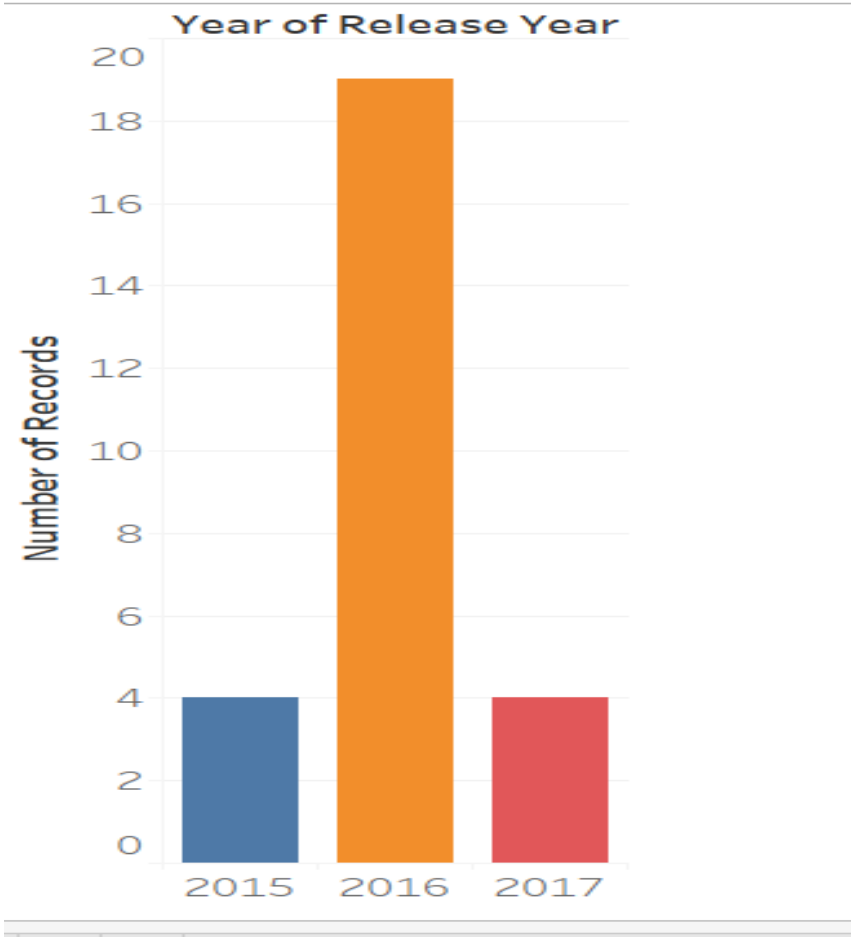
Title and release



Alphabet release



Numbers and release



Some questions

THE UNIVERSITY OF WESTERN AUSTRALIA

- What shows starting with P were released in 2015?
- How many shows have been issued with rating of G?
- What was the highest rating show of 2012?

Tableau is free for instructors around the world

Accounting analytics in the classroom

1. Introduction to big data, data analytics
2. Data and ethics
3. Tableau weeks 1 – 4 (covers basic data, visualisation, analytical tools, audit)
7. Case study with Tableau
8. Guest lecture – data analytics in health care
9. Guest lecture – data analytics in tax
10. XBRL/SBR
11. Cybersecurity
12. Revision