GENERAL ASSEMBLY

DATA SCIENCE

11 WEEK PART TIME COURSE

Week 2 – Data Visualisation
Wednesday 30th March

1. What is Data Visualisation?
2. Why do we visualise data?
3. How do we visualise data?
4. Lab
5. Discussion

WHAT IS DATA VISUALISATION?

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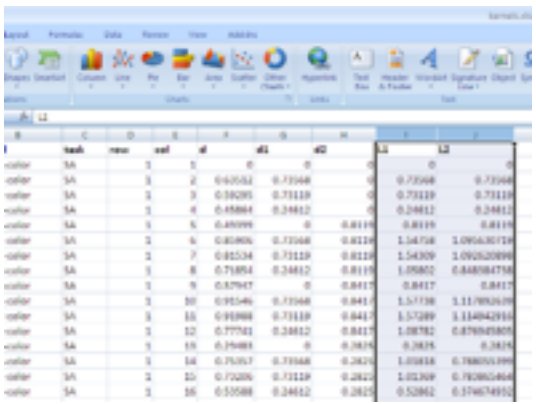
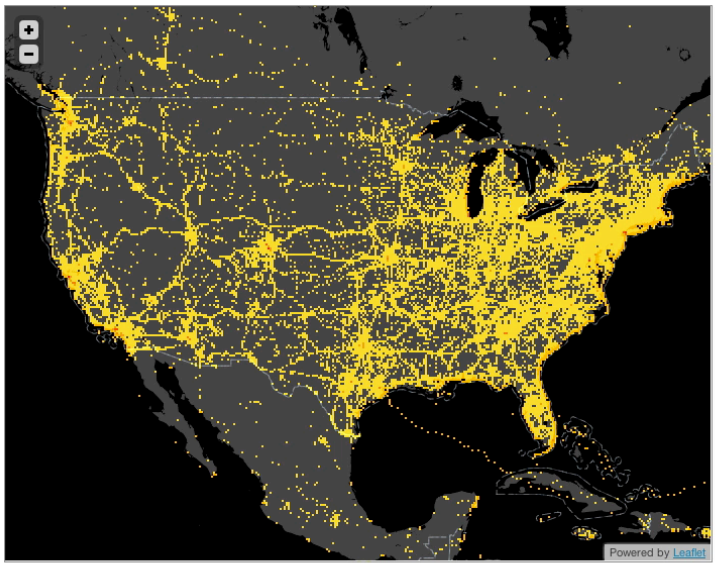
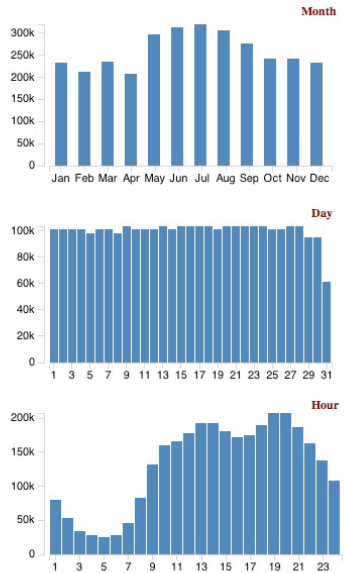






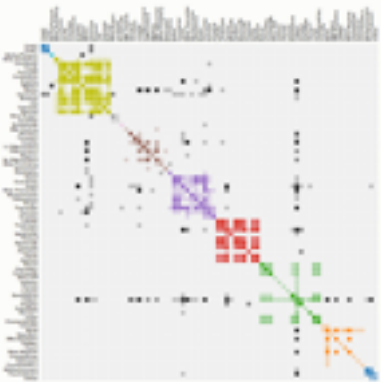
- Present information that is intuitive and clear for the viewer
- Turn numbers in a spreadsheet into something people can interpret and extract insights

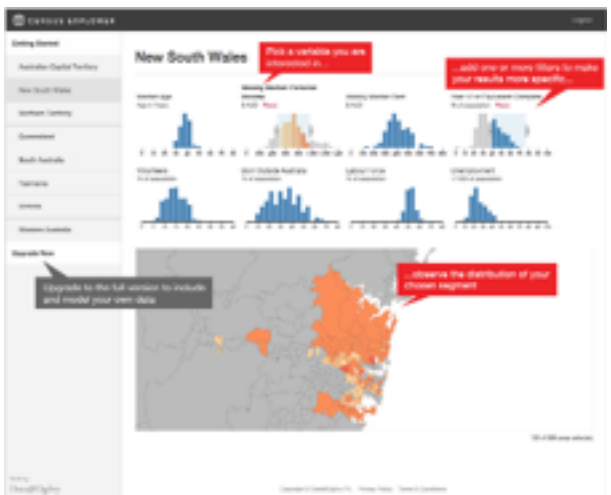
Reporting

- Dashboards and Business Intelligence
- Know the questions you want answers to
- Can detect changes from the norm
- Good for taking a 30,000 foot view of the problem

Exploring

- Exploratory Data Analysis
- Combines multiple data sources for single view of a problem
- Technical analysis of data
- Combined with modelling allows for the discovery of new problems and solutions



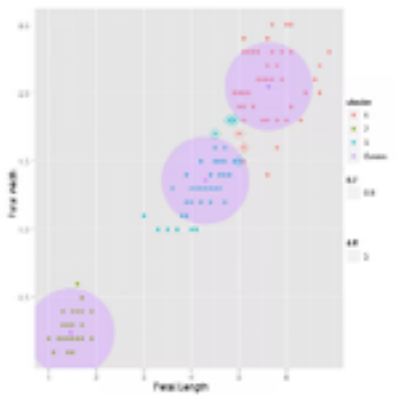


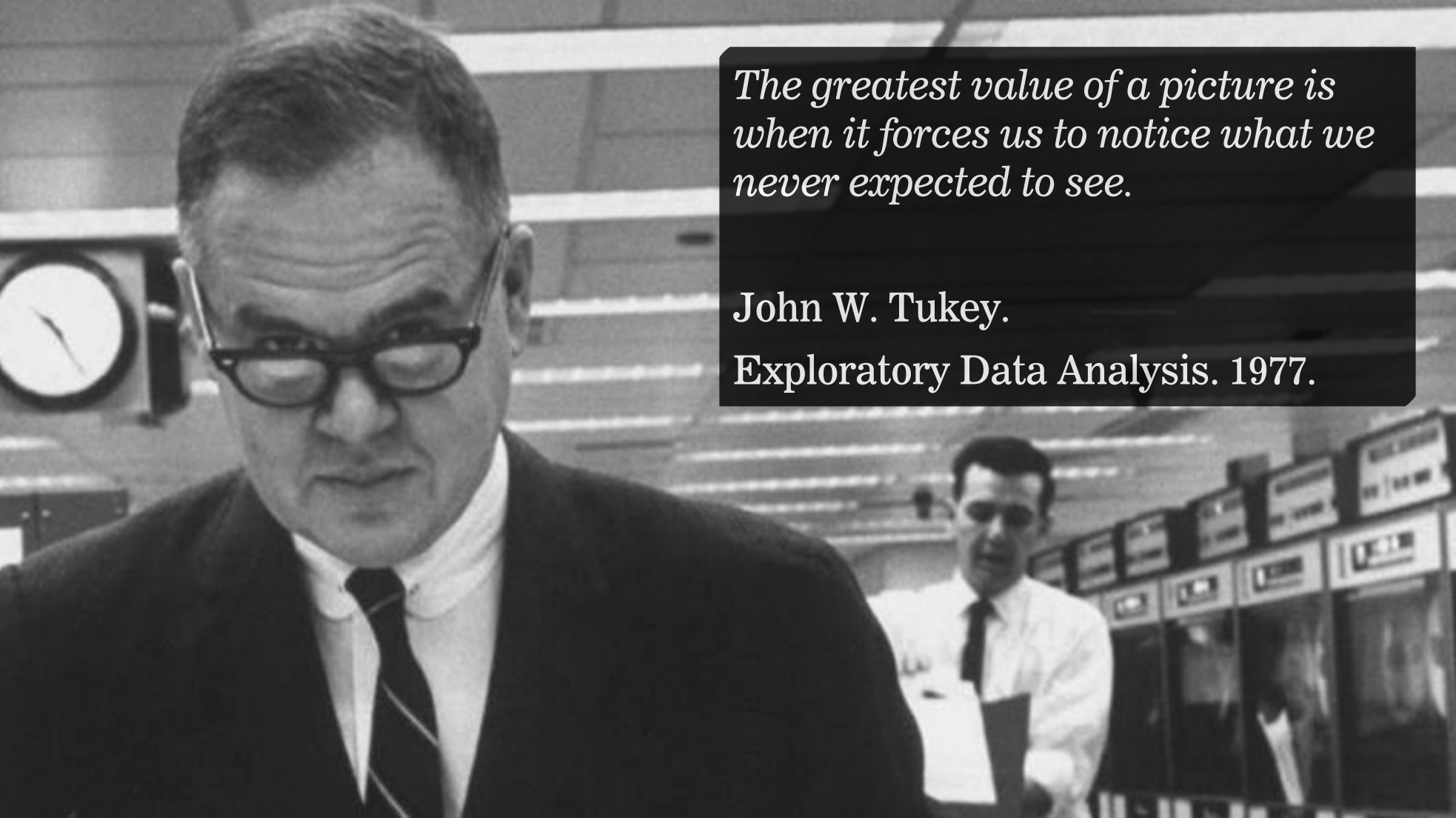

Ease of Use
Power
tableau

TOOL TRADEOFFS

	Easy to Use	Powerful
Advantages	• Provides a useful starting point • Familiar to a large audience • Prototyping and design time is reduced • Default settings reduce the options and thinking that goes into producing a graph	• Scales to larger datasets • Customised visualisations can create engaging visualisations • Open-source (so free to run and extend) • Non-obvious insights can be discovered with modelling tools • Re-use code to produce similar charts for different data
Disadvantages	• Reproducing analysis requires lots of manual effort • Limited to relative small data sets • Solves known problems and cannot answer complex questions • Licensing can be expensive	• Requires specialist skills to produce a graph • Training and education for some of the output might be necessary

- Communicate what's happening within the business
- Support decisions with information
- Measure and report the impact of decisions
- Discover ways to improve the business




The greatest value of a picture is when it forces us to notice what we never expected to see.
John W. Tukey.
Exploratory Data Analysis. 1977.

DATA SCIENCE PART TIME COURSE

DATA VISUALISATION LAB

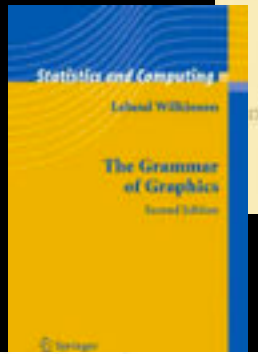
DISCUSSION TIME

- Review of last week
- Further Reading for Data Visualisation
- Check in with homework/course project

WEEK 1

DATA SCIENCE – Week 2 Day 1

DISCUSSION TIME



Further Reading

- Edward Tufte, The Visual Display of Quantitative Information
- Leland Wilkinson, The Grammar of Graphics
- Scott Murray, Interactive Data Visualisation for the Web (free online)
- flowingdata.com
- New York Times (Upshot)

DISCUSSION TIME

Homework/Course Project

- How’s it going ?