

An Empirical Study of Visualisation of Data

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0.1 Introduction

- What is visualisation?
- Understanding theory of visualisation and implementation in Python, R and D3.
- Types of visualisation (ie. static, dynamic and interactive)

Principles of data vis:

1. The audience (who?)
2. The message or questions (what?)
3. The circumstances under which the audience interacts with the data (smartphone/laptop etc) (how?)

0.2 Literature reviews

Look at advances in visualisation practices based on when papers were written.

(ie. in an older paper they preferred this, but in a more recent paper they preferred this)

Is this down to the author's personal preference or do multiple papers back this up?

The Eyes Have It: A Task by Data Type Taxonomy for Information Visualizations

0.3 Implementation of Visualisation

- In Plotly, ggplot and D3
- Ease of use
- Consider data analysis tools available
- Interactivity of visualisations (pros/cons) (using Shiny, plotly and D3)
- Reproducibility of visualisations (ie. use of out of software editing such as word or powerpoint to change labels etc)
- Publication ready output?
- Concept of storytelling

0.4 Respondent Study

- How the human mind interprets visuals
- Focus groups and/or survey
- Replicate research
- Intuitive visualisations

0.5 Visualise Study and Data Analysis

0.6 Critique of Implementation

Chapter 1

Data collection

1.1 Background on survey design

1.2 Specific goals of survey for this chapter

1.3 The survey

1.4 Conclusion