

Summarizing

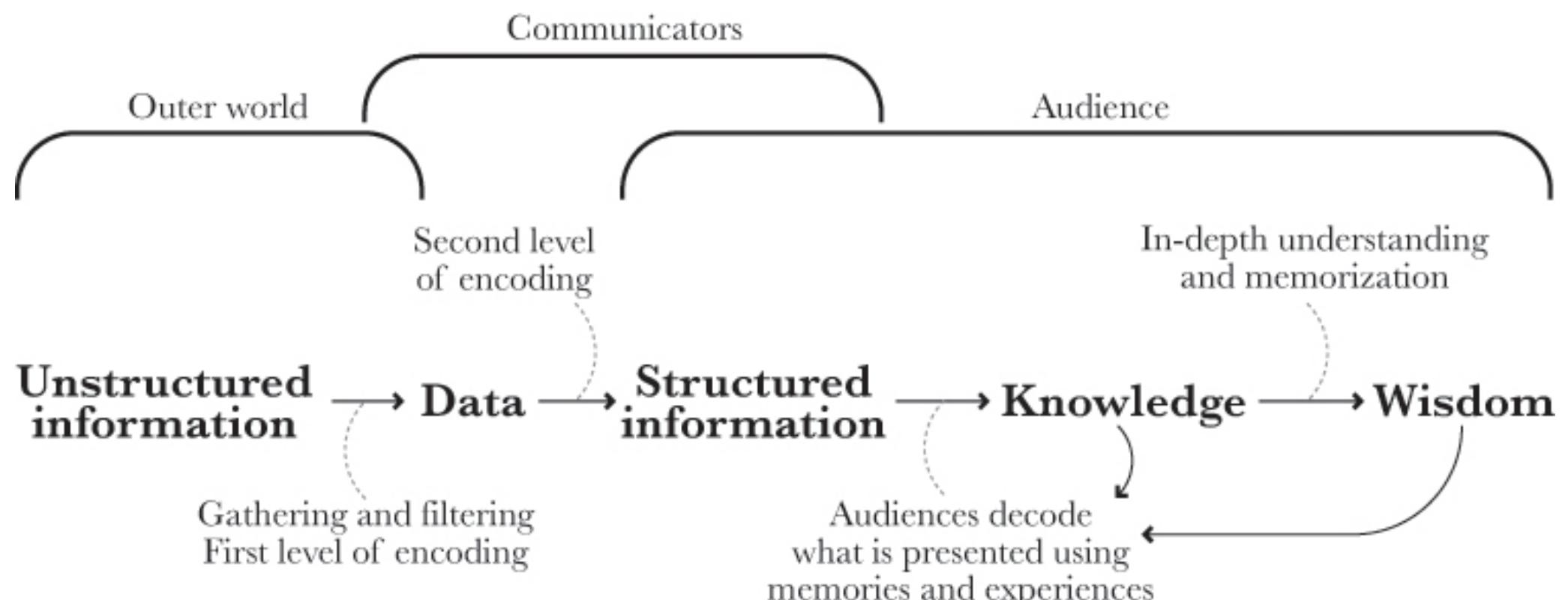
Surplus of data available

Differences in:

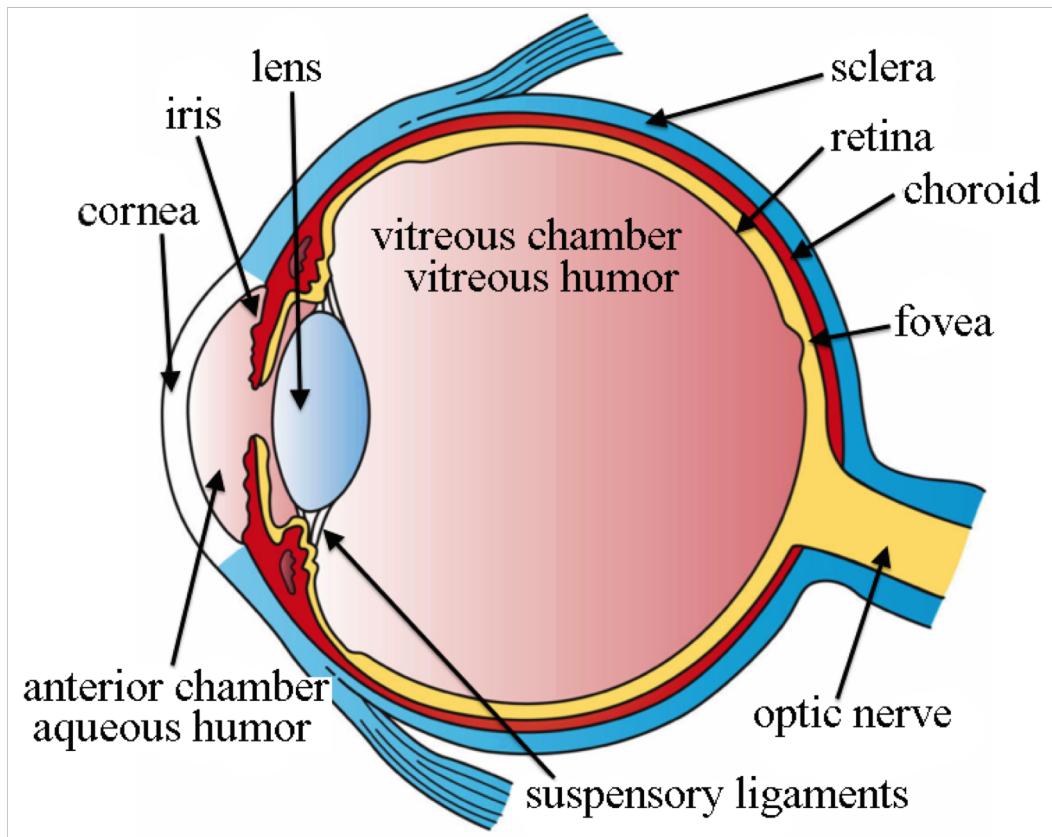
- sources
- quality
- speed

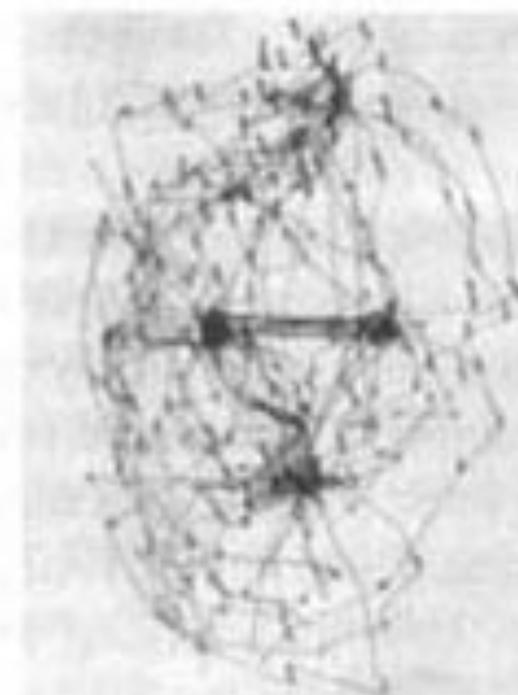
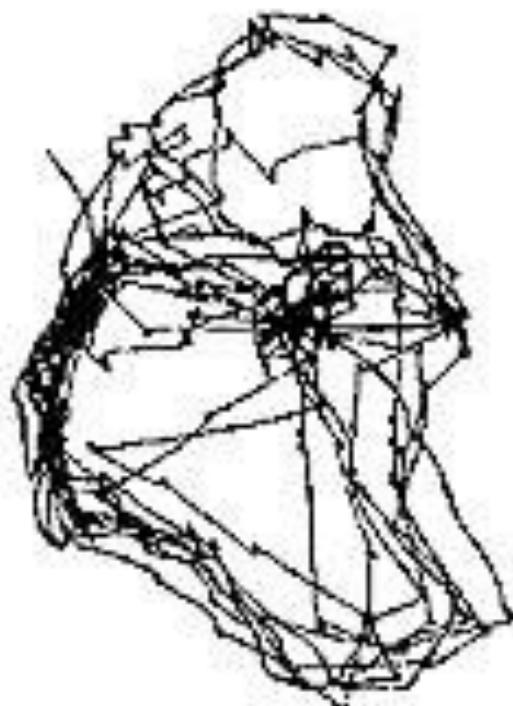
Availability is not the issue: **Interpretation and giving meaning is**





The Functional Art - Alberto Cairo - ch.1 Fig 1.8





Yarbus A L. [Eye Movements and Vision](#). New York: Plenum Press; 1967. p 180 p181

The “Smart” Brain

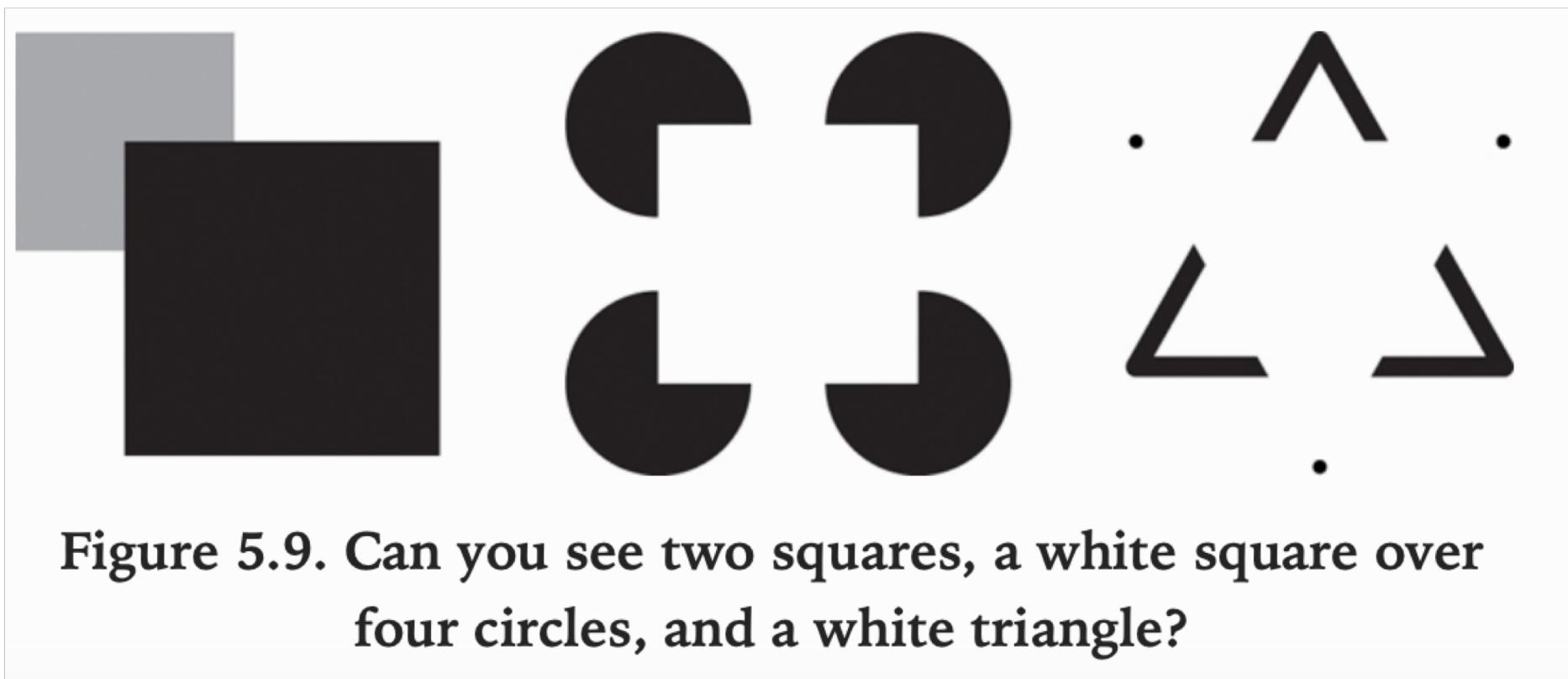


Figure 5.9. Can you see two squares, a white square over four circles, and a white triangle?



Figure 6.1. How quickly can you see the wolf in the trees in each of these illustrations?

Identify the numbers '6'

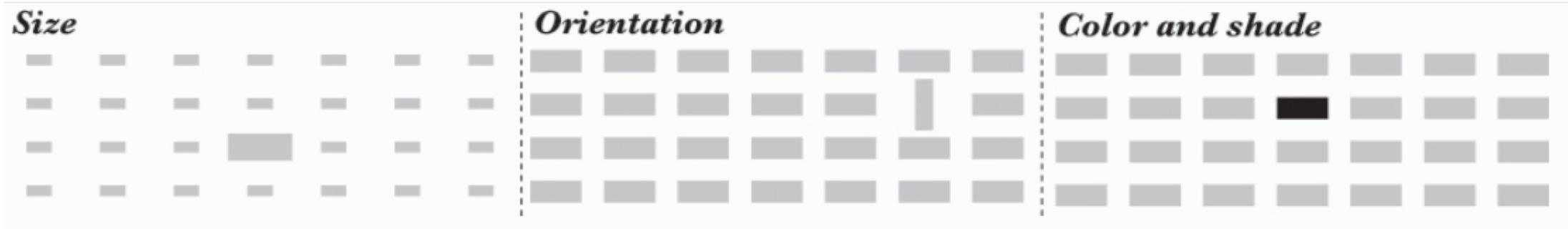
4 3 6 7 9 8 1 2 5 5 1 1 5 6 1 1 5 8 1 3 4 1 5 9 1 5
1 5 3 4 5 1 1 5 2 5 1 3 1 9 2 5 1 2 1 8 9 1 4 1 1 6
5 2 1 6 1 1 6 1 2 4 1 8 1 6 1 5 8 2 4 1 4 1 5 1 9 1
1 4 1 8 1 9 5 1 2 8 1 9 1 1 5 1 1 5 1 6 1 8 2 6 1 2
2 6 1 9 1 5 1 2 2 1 4 1 1 8 2 1 4 1 2 4 4 1 1 9 1 2
3 1 2 5 1 1 6 1 5 3 1 8 2 1 3 8 1 1 8 1 4 1 3 1 6 1

Identify the numbers '6'

4 3 6 7 9 8 1 2 5 5 1 1 5 6 1 1 5 8 1 3 4 1 5 9 1 5
1 5 3 4 5 1 1 5 2 5 1 3 1 9 2 5 1 2 1 8 9 1 4 1 1 6
5 2 1 6 1 1 6 1 2 4 1 8 1 6 1 5 8 2 4 1 4 1 5 1 9 1
1 4 1 8 1 9 5 1 2 8 1 9 1 1 5 1 1 5 1 6 1 8 2 6 1 2
2 6 1 9 1 5 1 2 2 1 4 1 1 8 2 1 4 1 2 4 4 1 1 9 1 2
3 1 2 5 1 1 6 1 5 3 1 8 2 1 3 8 1 1 8 1 4 1 3 1 6 1

4 3 **6** 7 9 8 1 2 5 5 1 1 5 **6** 1 1 5 8 1 3 4 1 5 9 1 5
1 5 3 4 5 1 1 5 2 5 1 3 1 9 2 5 1 2 1 8 9 1 4 1 1 **6**
5 2 1 **6** 1 1 **6** 1 2 4 1 8 1 **6** 1 5 8 2 4 1 4 1 5 1 9 1
1 4 1 8 1 9 5 1 2 8 1 9 1 1 5 1 1 5 1 **6** 1 8 2 **6** 1 2
2 6 1 9 1 5 1 2 2 1 4 1 1 8 2 1 4 1 2 4 4 1 1 9 1 2
3 1 2 5 1 1 **6** 1 5 3 1 8 2 1 3 8 1 1 8 1 4 1 3 1 **6** 1

Pre-attentive detection features



Choice in presenting data!

- Guide your reader in the interpretation and exploration of data

Input from:

- Psychology
- Human Computer Interaction
- Statistics
- Design/Art

Applications

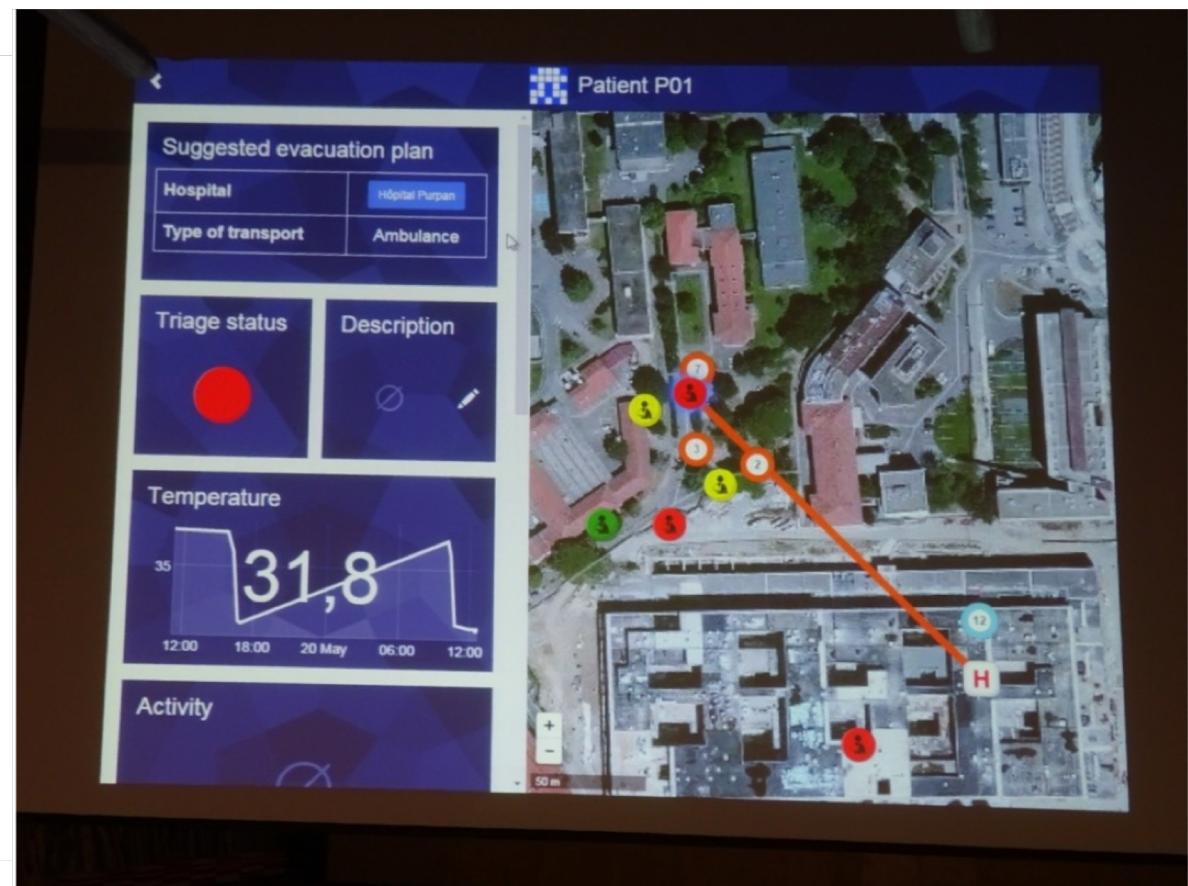
- Journalism
 - Data analytics
 - Dashboard design
 - PR / marketing
-
- Student projects / BSc Theses (?)

BRIDGE



Risavika harbour exercise—location of the 3rd BRIDGE demonstration in Stavanger, Norway

BRIDGE interface design



Patient data on an eTriage app for Android tablets.

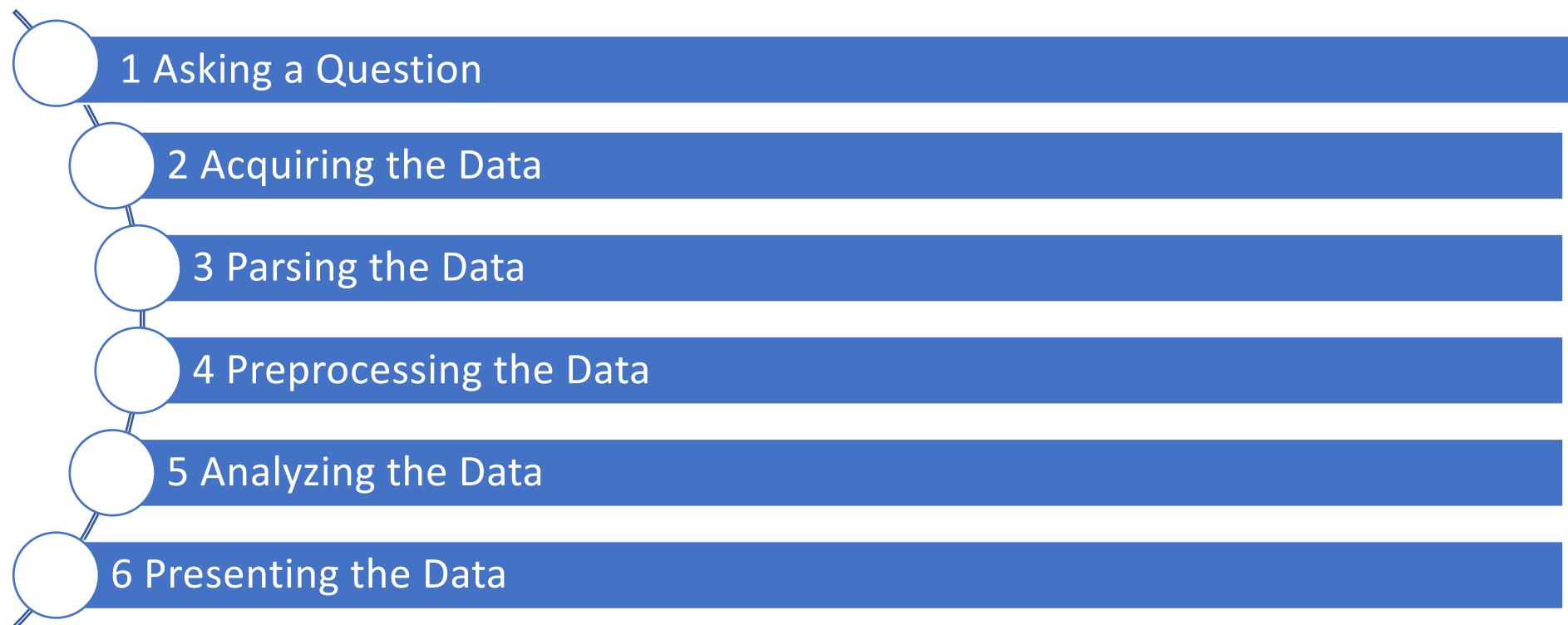
Next week

- Visual Design
 - Concepts
 - Strategies
 - Tips
- Preparation for designing and critique's

Small exercise – put the pipeline in order

- Acquiring the Data
- Analyzing the Data
- Asking a Question
- Parsing the Data
- Preprocessing the Data
- Presenting the Data

Data Processing Pipeline



Scraping

Web scraping is a way of extracting data from websites. While this process could be done manually (by reading information on a website, and then writing that information down in a file) it is usually done through the use of software. Scraping can be a valuable tool for extracting data, when a website does not give you an option to download the content, either through an API or a direct download link. One example of such a website is the IMDB page that we will be scraping in this exercise.

In this assignment you will learn to use the Document Object Model (DOM) using Python via the BeautifulSoup library, in a few weeks you will also access the DOM from Javascript. We provide some scaffolding for the programming exercise in this week's homework. We will be trying to answer the question: Between 2008 and 2017, were there any years in which movies (from the top 50) scored significantly higher?

- The IMDB highest rated movies exercise: [moviescraper.py](#)

Pipeline step	This week
Asking a Question	Were there better years between 2007 and 2018?
Acquiring the data	Scraping IMDB to CSV
Parsing the data	Loading in visualizer.py
Preprocessing the data	During scraping, and in visualizer.py
Analyzing the data	Calculating and plotting the average scores visualiser.py
Presenting the data	Your final product: a line chart