

# DATA VISUALIZATION

Compelling Data-Driven Stories

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# |00 INTRODUCTION

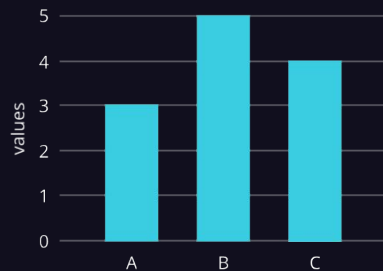
**Reporting** (Scientific Papers, Journal, ...)

Carry Argumentation' **Weight**

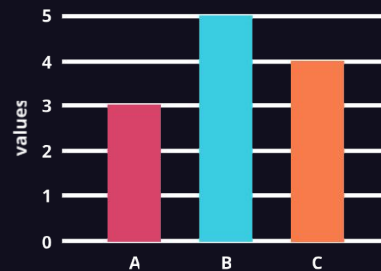
Develop an Eye for **Compelling Graphics**

# |00 INTRODUCTION

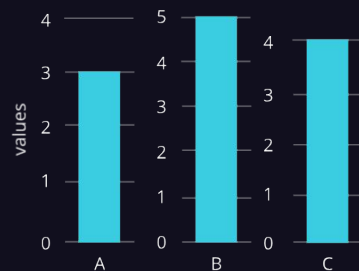
**Good**



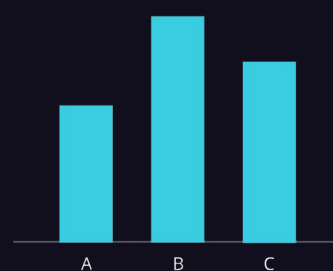
**Ugly**



**Bad**



**Wrong**



# 01|

## DATA & AESTHETICS

Taste and Colours



# |01 DATA & AESTHETICS



## QUANTITATIVE

Characteristic, Descriptor that  
**can't be Measured Objectively**

Color, Smell, Texture

## QUALITATIVE

Characteristic, Descriptor that  
**can be Measured Objectively**

**Discrete**

Integers

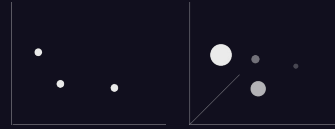
**Continuous**

Floating Values



# |01 DATA & AESTHETICS

**POSITION**



**SHAPE**



**SIZE**



**COLOR**



**LINE WIDTH**



**LINE TYPE**



# |01 DATA & AESTHETICS

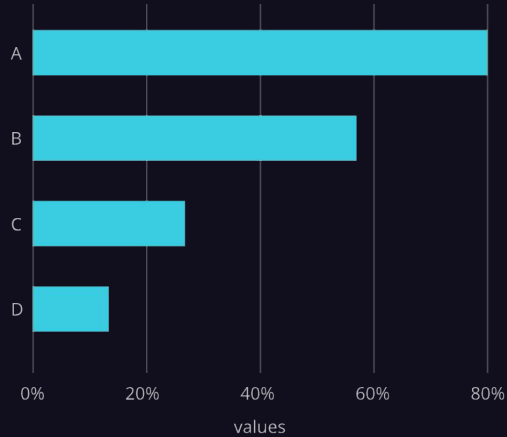


Figure 1.5 Value against category. B experiences one of the largest value among its category.

VS

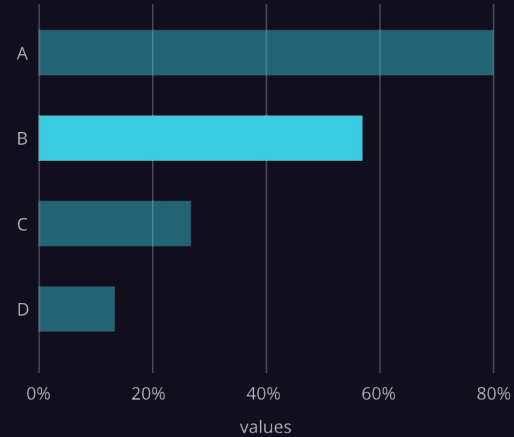


Figure 1.5 Value against category. B experiences one of the largest value among its category.

# |01 DATA & AESTHETICS

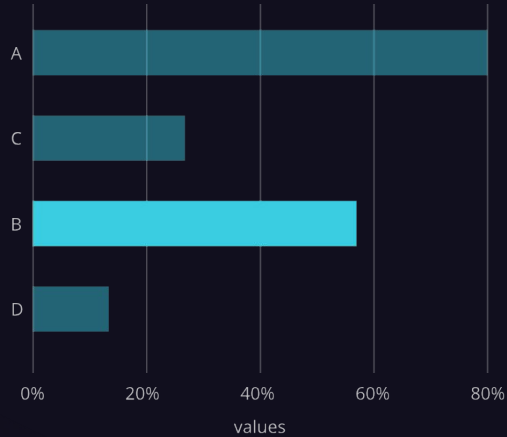


Figure 1.5 Value against category. B experiences one of the largest value among its category.

VS

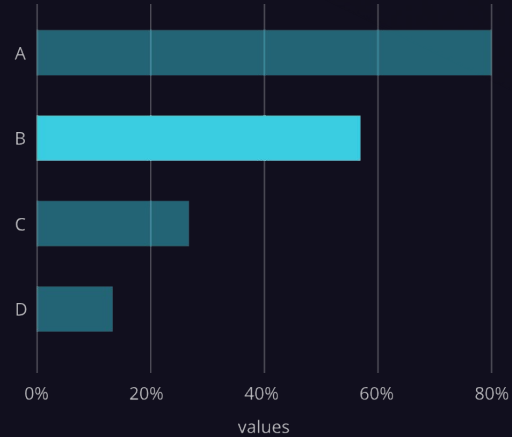
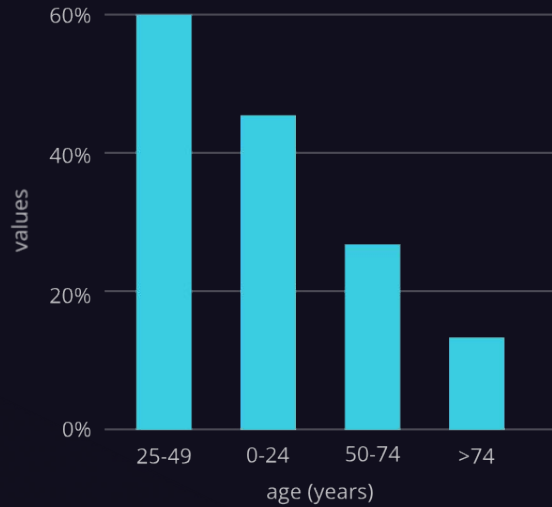


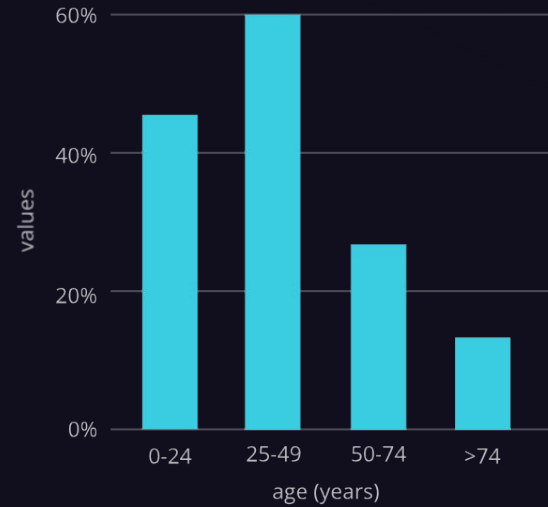
Figure 1.5 Value against category. B experiences one of the largest value among its category.



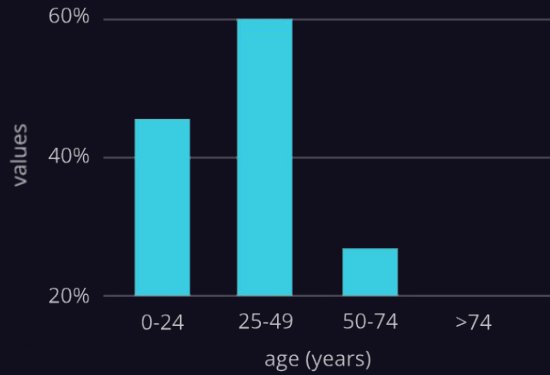
# |01 DATA & AESTHETICS



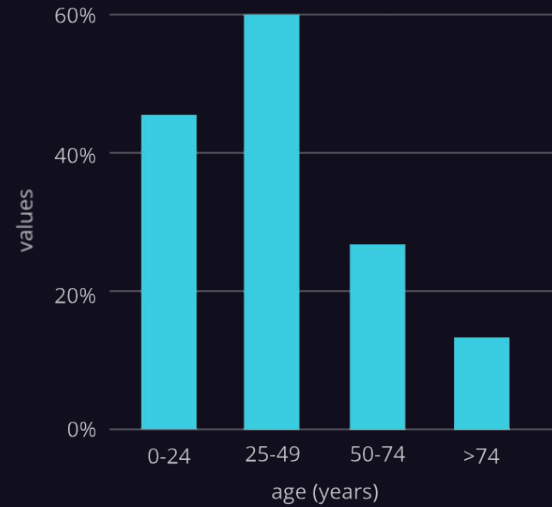
VS



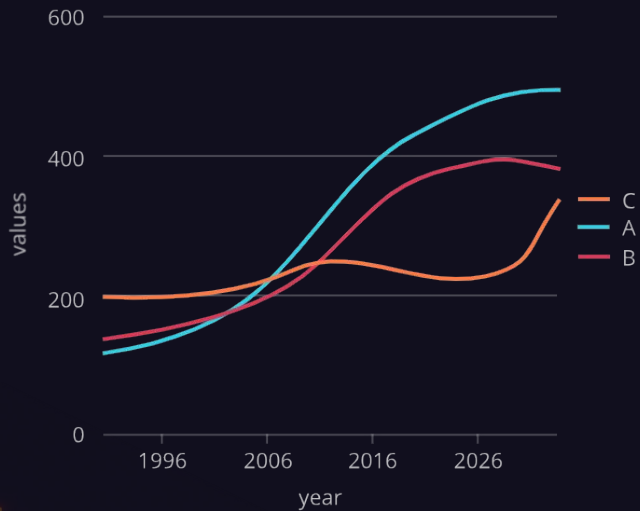
# |01 DATA & AESTHETICS



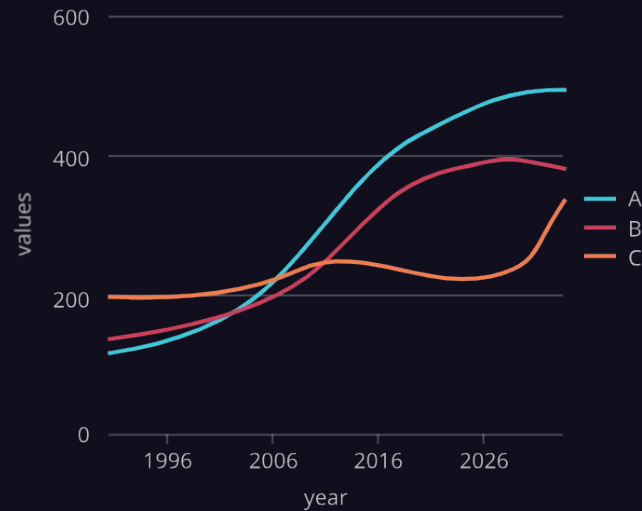
VS



# |01 DATA & AESTHETICS



VS



# |02

## TYPE OF GRAPHS

Choose your Weapons

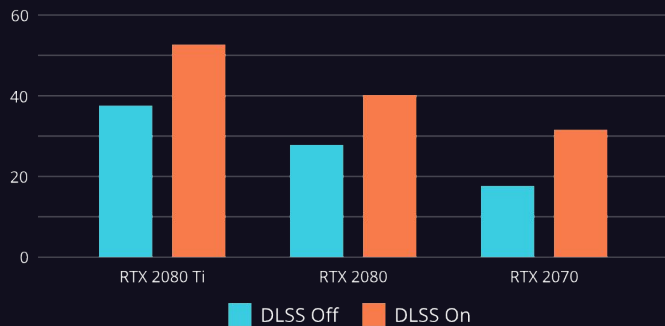
SCATTER PLOT  
BAR PLOT  
HEATMAP  
...  
T T ER

## |02 TYPE OF GRAPHS

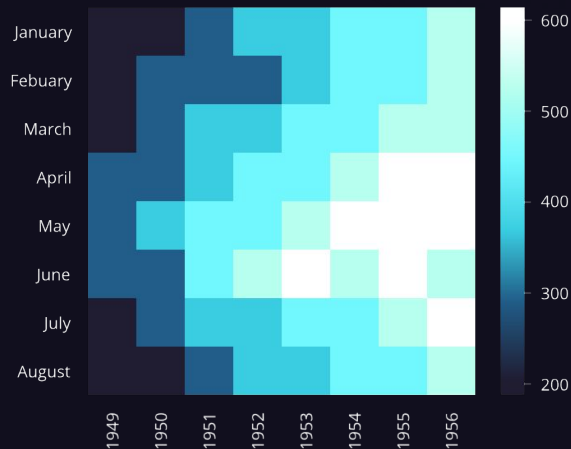
### AMOUNTS

3DMark Port Royal GeForce RTX DLSS Performance

2560x1440, i7-8086K @ 5.2GHz, 32GB RAM, Win10x64, 418.81 WHQL Game Ready Driver



Orders of Something from 1949 to 1956

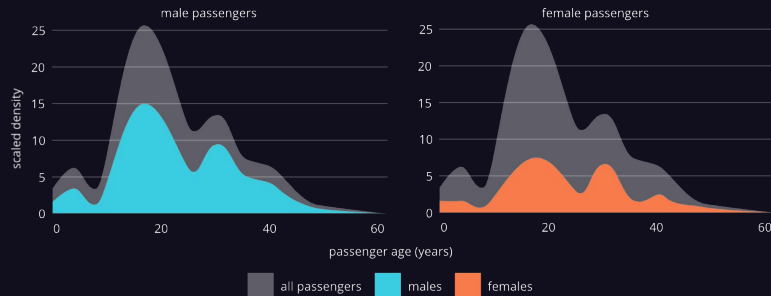


## |02 TYPE OF GRAPHS

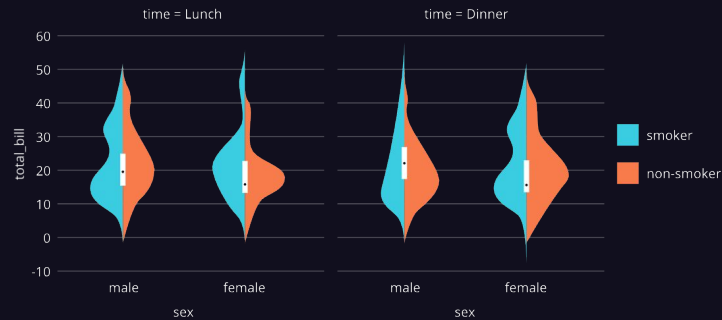
### DISTRIBUTIONS

SCATTER PLOT  
BAR PLOT  
HEATMAP  
...  
T K E R

Titanic Passenger Distribution



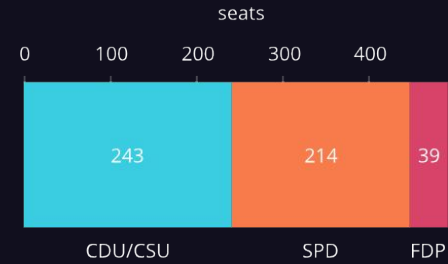
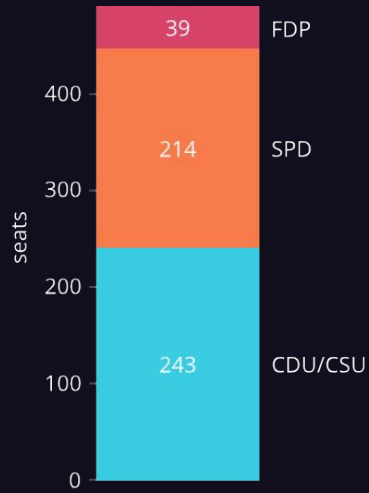
Smokers Vs Nonsmokers



SCATTER PLOT  
BAR PLOT  
HEATMAP  
...  
T K E R

## |02 TYPE OF GRAPHS

### PROPORTIONS



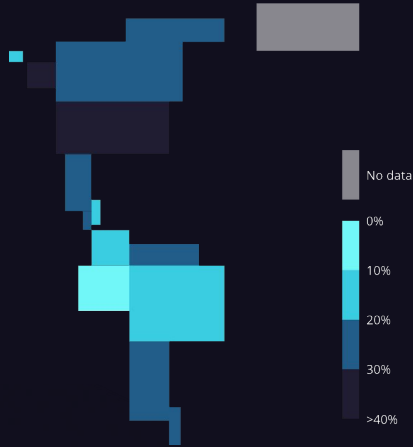
[illegible]



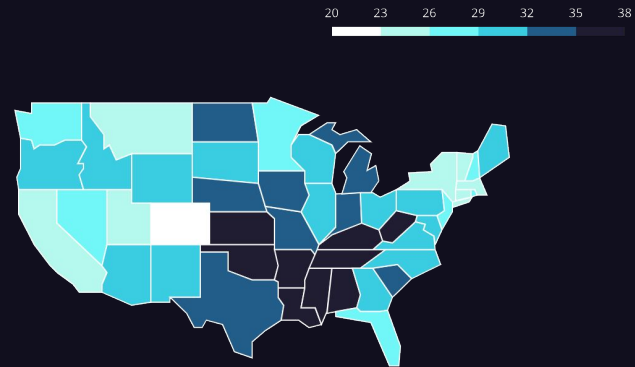
## |02 TYPE OF GRAPHS

### GEOSPATIAL

Share of adults defined as obese, 2016

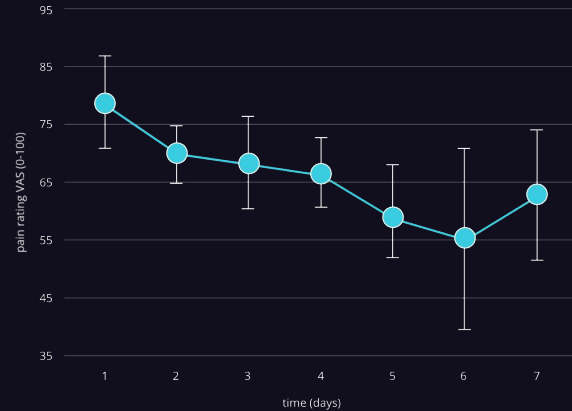
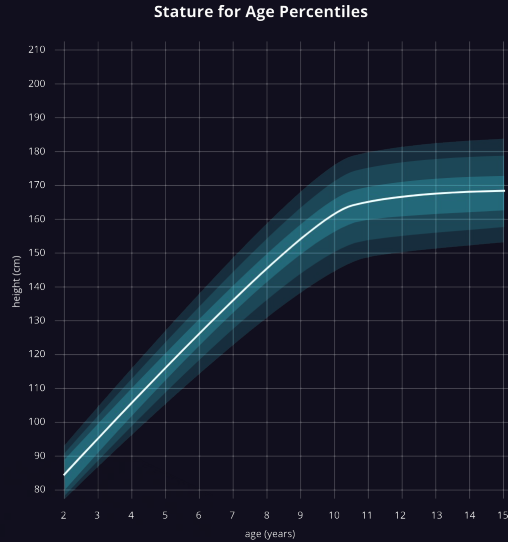


Percentage of adults defined as obese per State, 2016



## |02 TYPE OF GRAPHS

### UNCERTAINTY





03|

# MINIMALISM & PROPORTIONAL INK

Less is Often Better

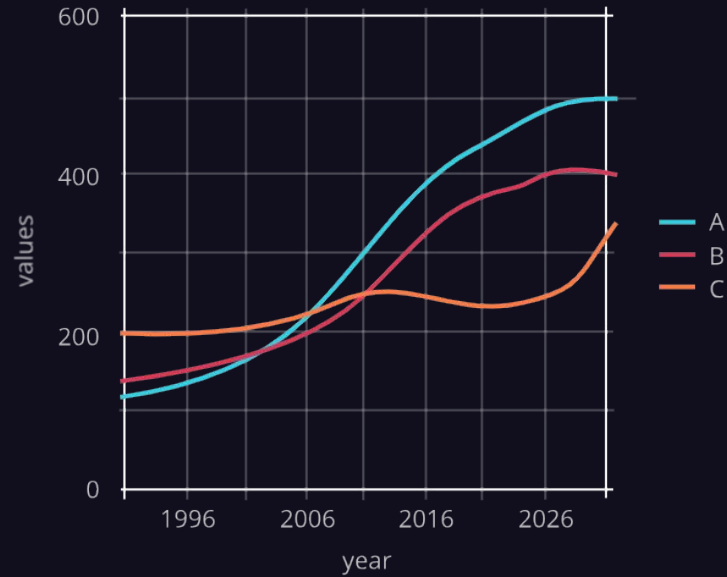
## |03 MINIMALISM & PROPORTIONAL INK



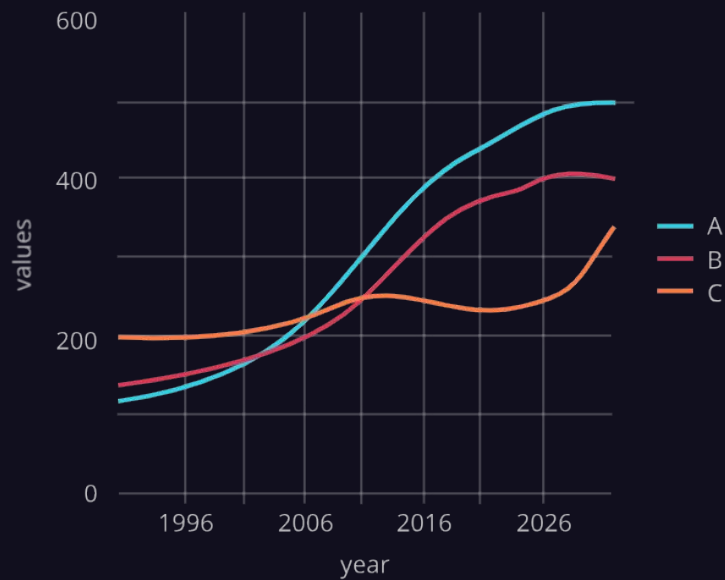
Maximize **Data to Ink Ratio**  
**Accessibility** First  
**Minimalism** and Fixed **Color Schemes**



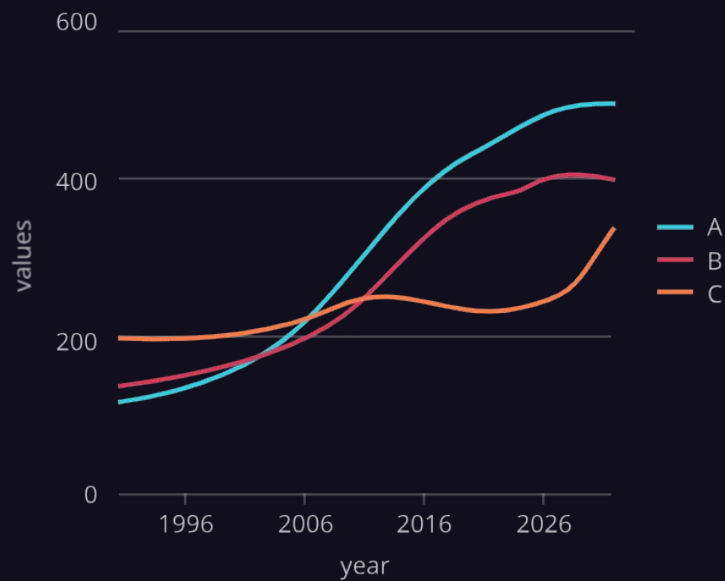
## |03 MINIMALISM & PROPORTIONAL INK



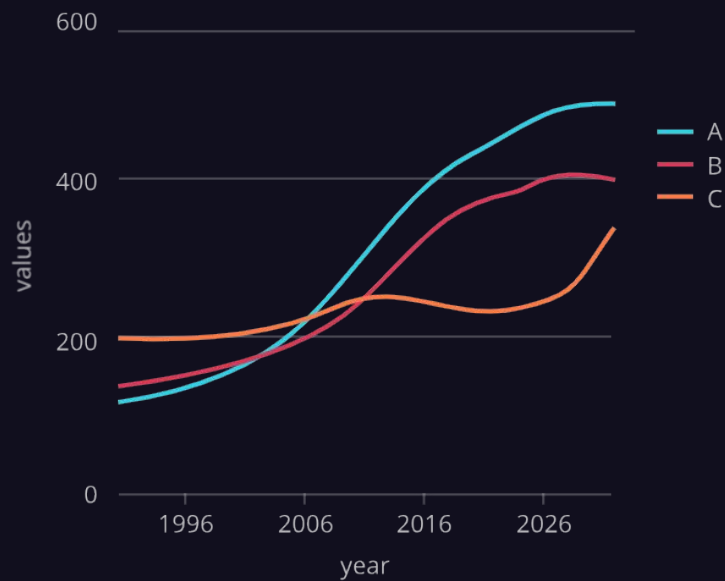
## |03 MINIMALISM & PROPORTIONAL INK



## |03 MINIMALISM & PROPORTIONAL INK

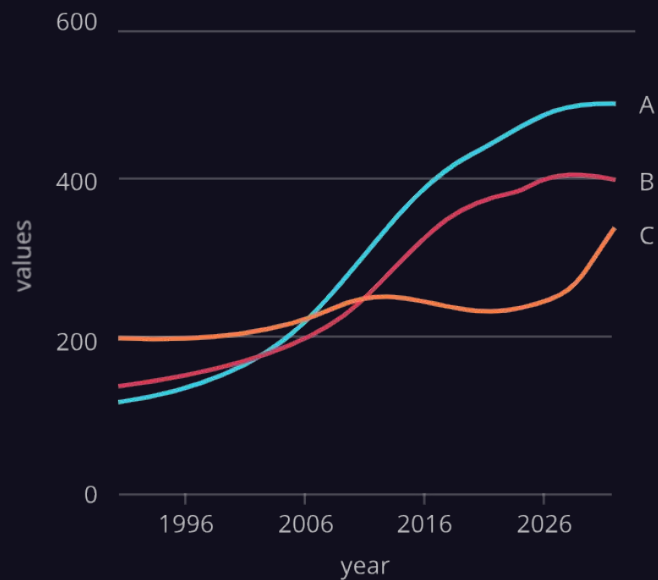


## |03 MINIMALISM & PROPORTIONAL INK





## |03 MINIMALISM & PROPORTIONAL INK



# |04

## CONTEXTUAL IZATION

Guide People



## |04 CONTEXTUALIZATION

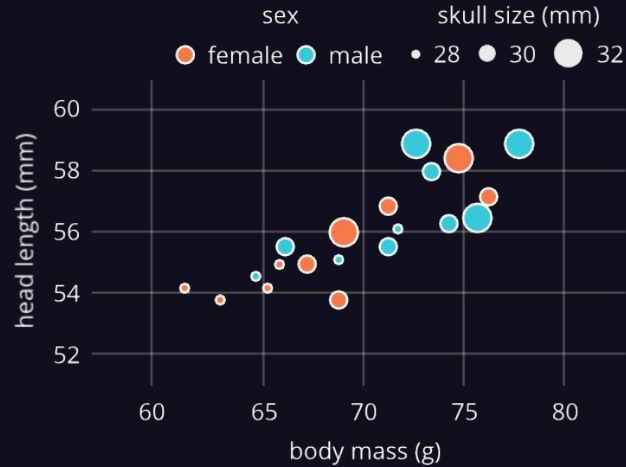


Figure 2-82. Head length versus body mass for 20 blue jays. The birds' sex is indicated by color, and the birds' skull size by symbol size. Head length measurements include the length of the bill while skull size measurements do not. Data source: Keith Tarvin, Oberlin College.

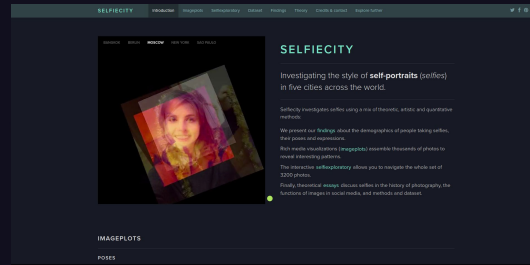
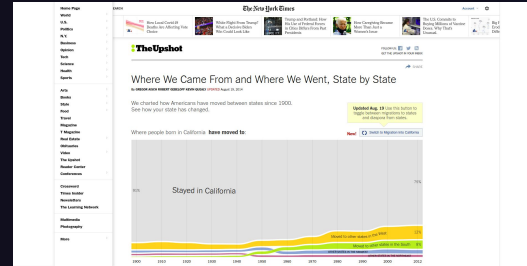
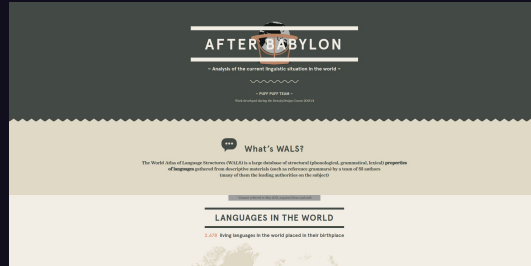
# 05|

## STORY TELLING

Deliver Untold Stories



# |05 STORYTELLING



# |06

## REFERENCE

Not Sponsored

Fundamentals of Data Visualization

A Primer on Making Informative and Compelling Figures

Claus O. Wilke

