

Data Visualization - Industry Sharing

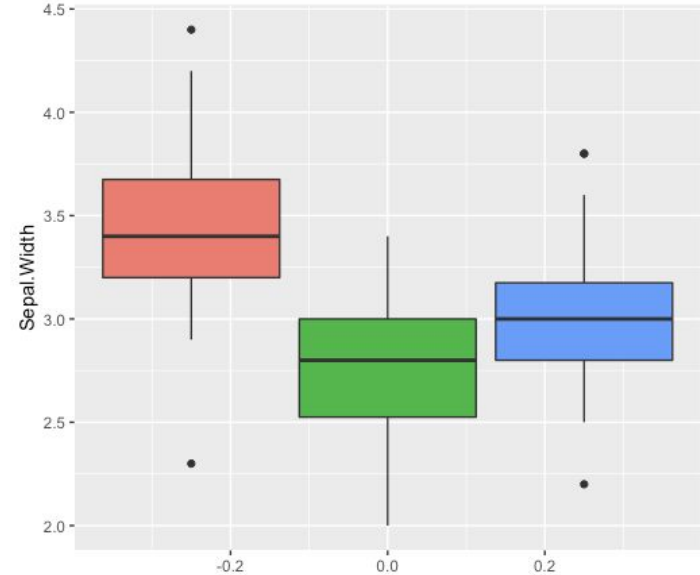
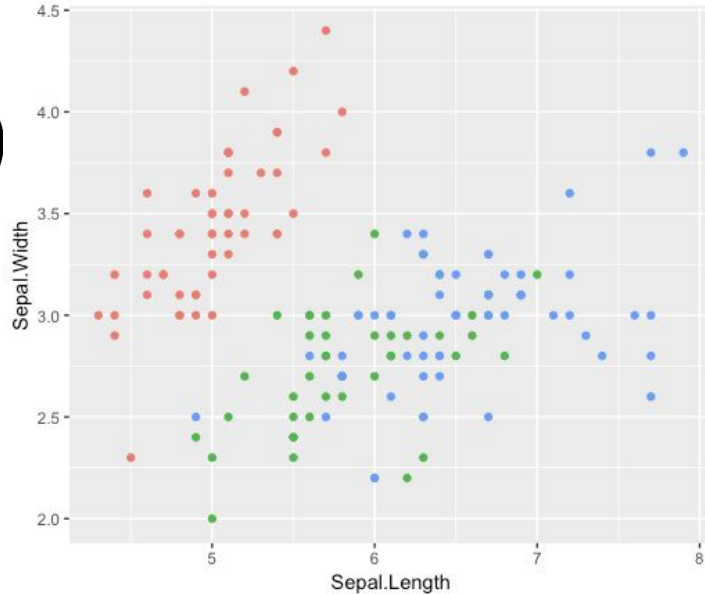
Organized by ITYC and SCS

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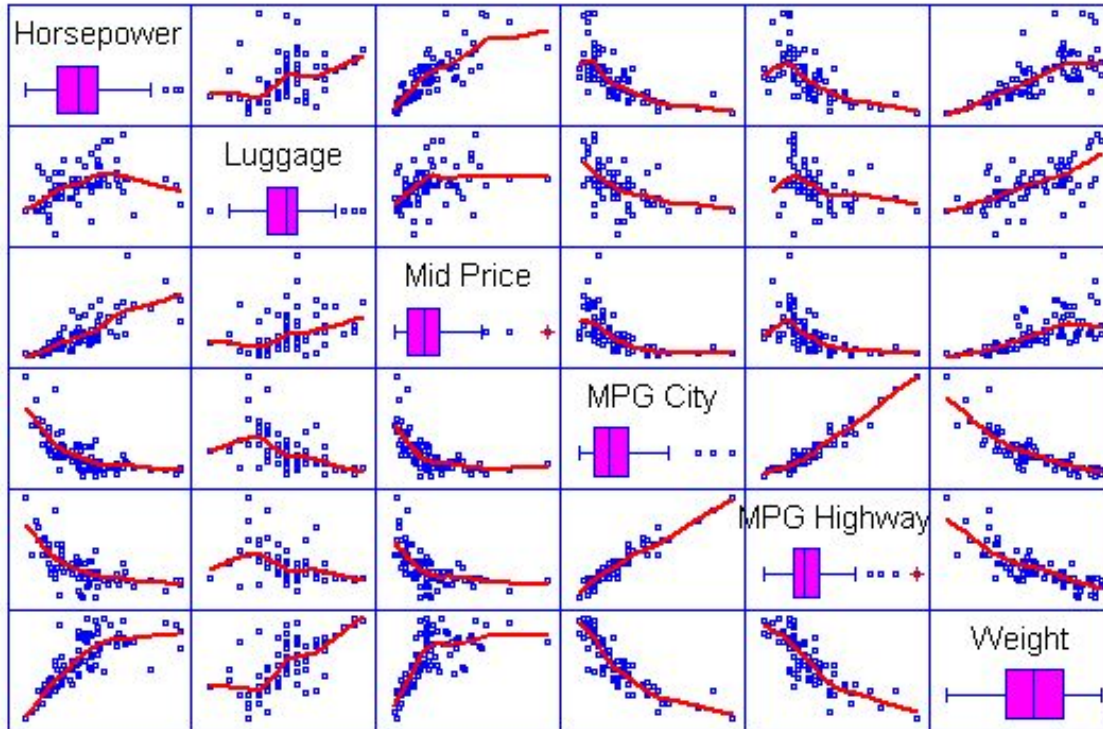
3 November 2018

WHY VISUALIZE?

Explore - how does the data look like?

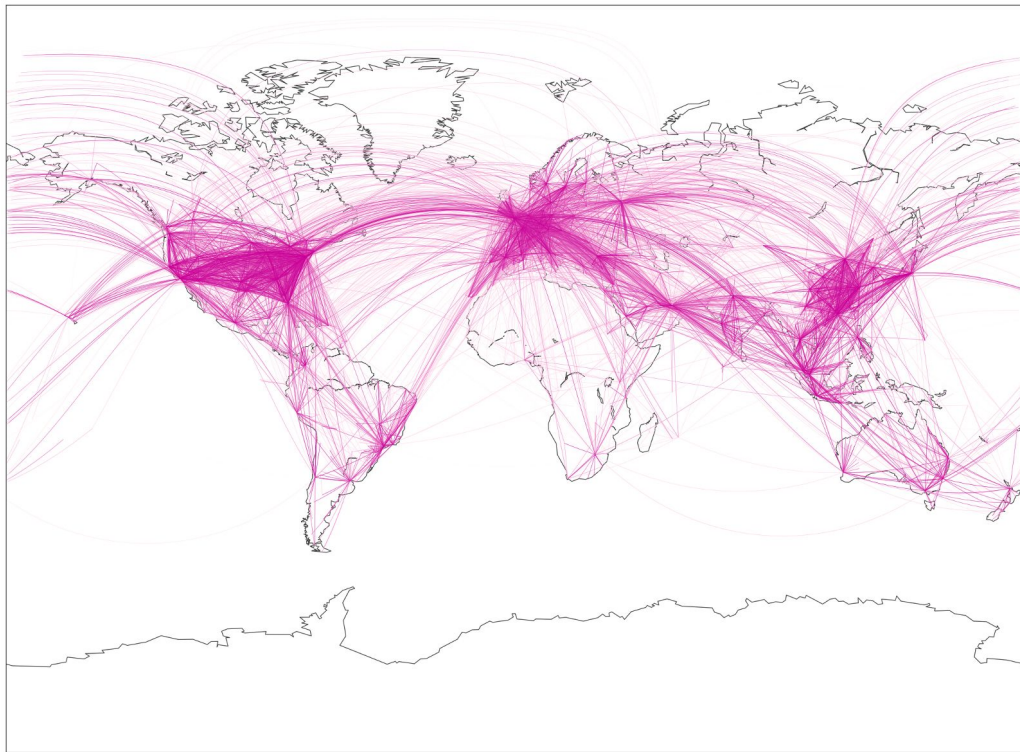


Explore - how does the data look like?



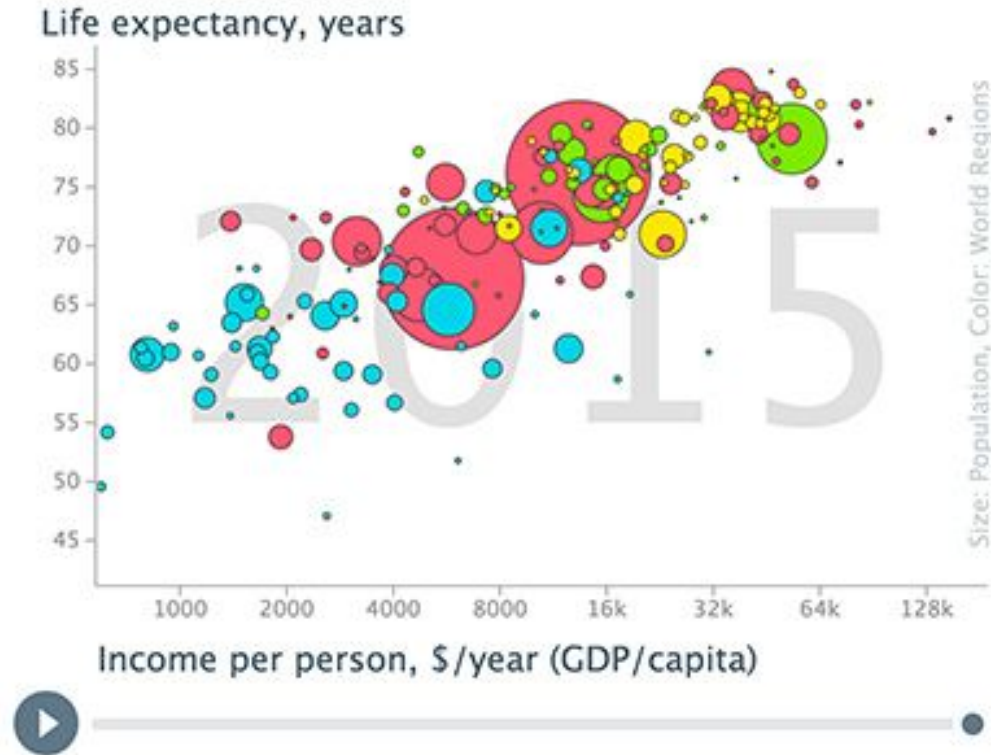
- What are the inherent trends / relationships
- Data can be raw or aggregated

Explore - how does the data look like?



Picture Source: <https://blog.hugo-larcher.com/flight-data-visualisation-with-pandas-and-matplotlib-ebbd13038647>

Explore - how does the data look like?



Picture Source: <https://www.gapminder.org>

Report - how are we doing?



Picture Source: <http://www.5wpr.com/new/public-relations-measure-impressions/>

Report - how are we doing?



- What are the top things the business cares about?
- Data usually aggregated
- Simple and easy to read

Data Storytelling - what is the message?



Picture Source:

<https://garyguwe.wordpress.com/2012/10/15/the-power-of-storytelling-10-reasons-why-stories-are-such-powerful-tools/>



- Mainly to persuade / engage
- Simple charts
- “Highlight” areas of interest / insights
- Use narratives to provide context / explain

Picture Source:

<https://www.forbes.com/sites/brentdykes/2016/03/31/data-storytelling-the-essential-data-science-skill-everyone-needs/#3a2293a352ad>

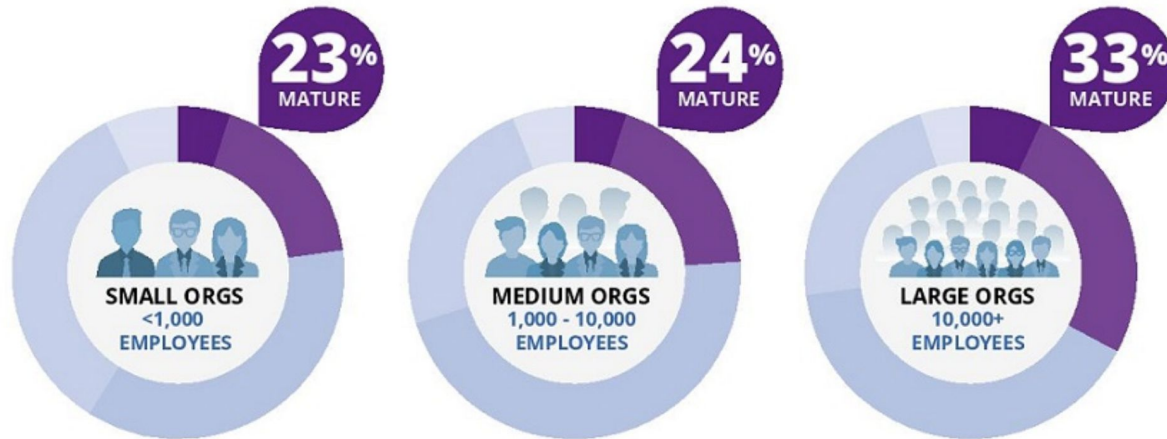
Data Storytelling - what is the message?

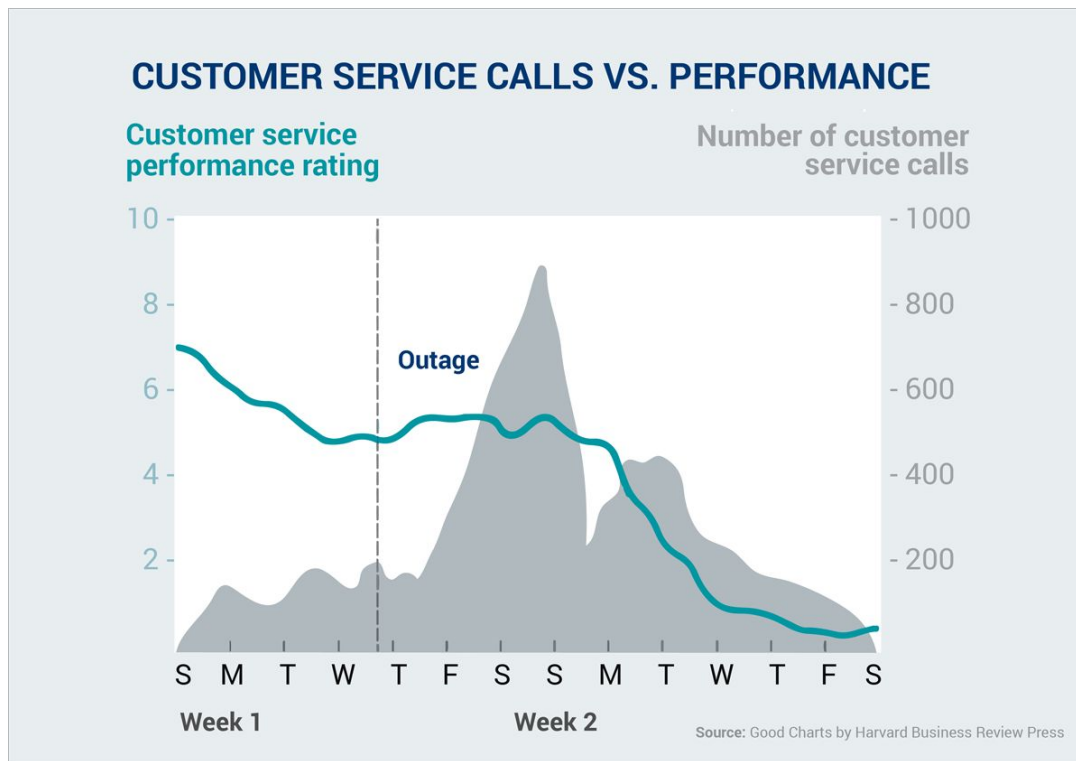


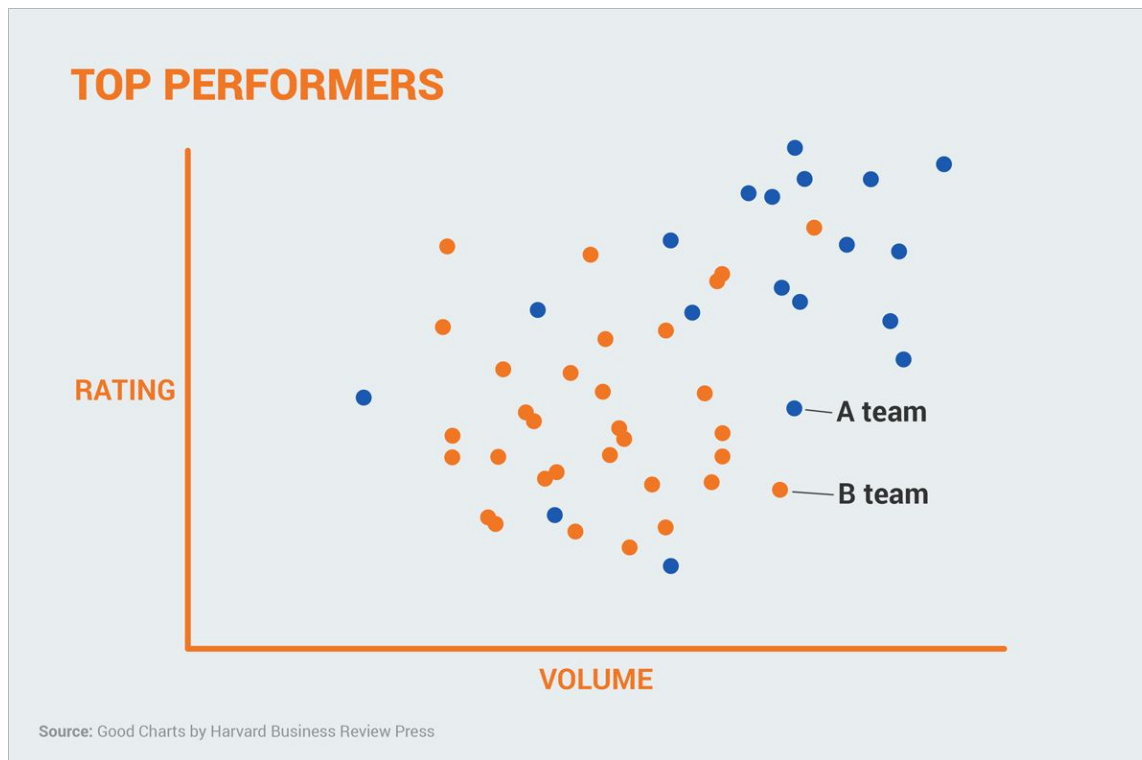


ORGANIZATION SIZE DOES MATTER

Larger organizations report more maturity than smaller organizations.



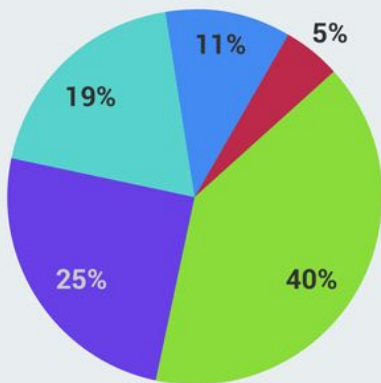




Survey Results

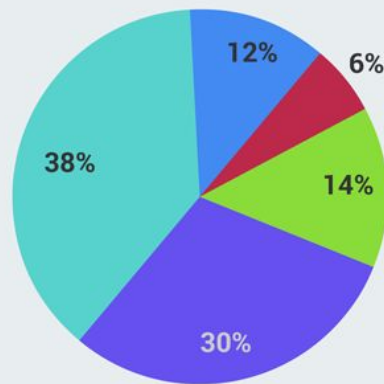
PRE: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



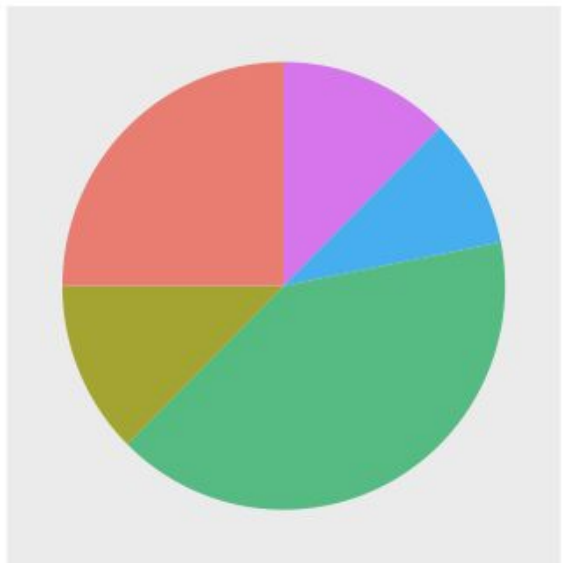
POST: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



Source: Storytelling With Data by Cole Nussbaumer Knaflic

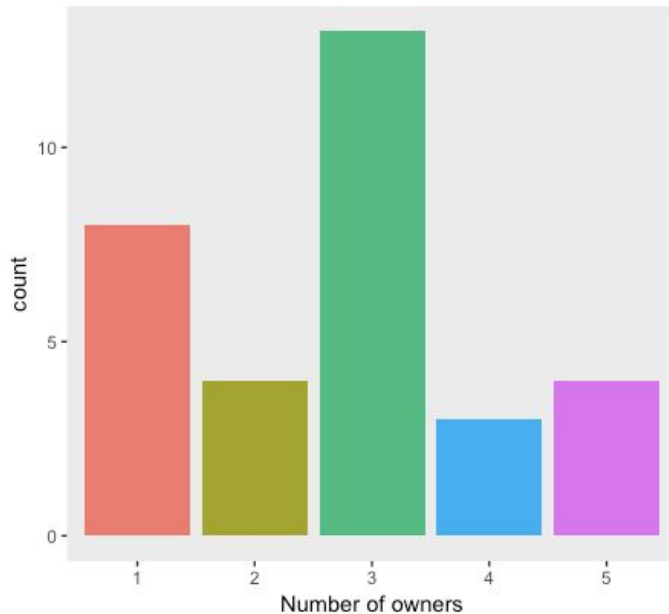
Number of cars by number of owners



Number of owners



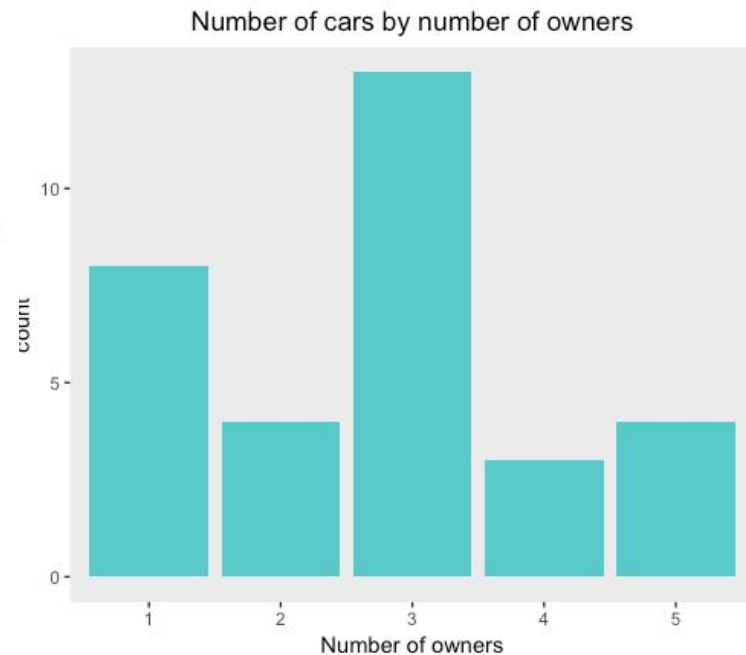
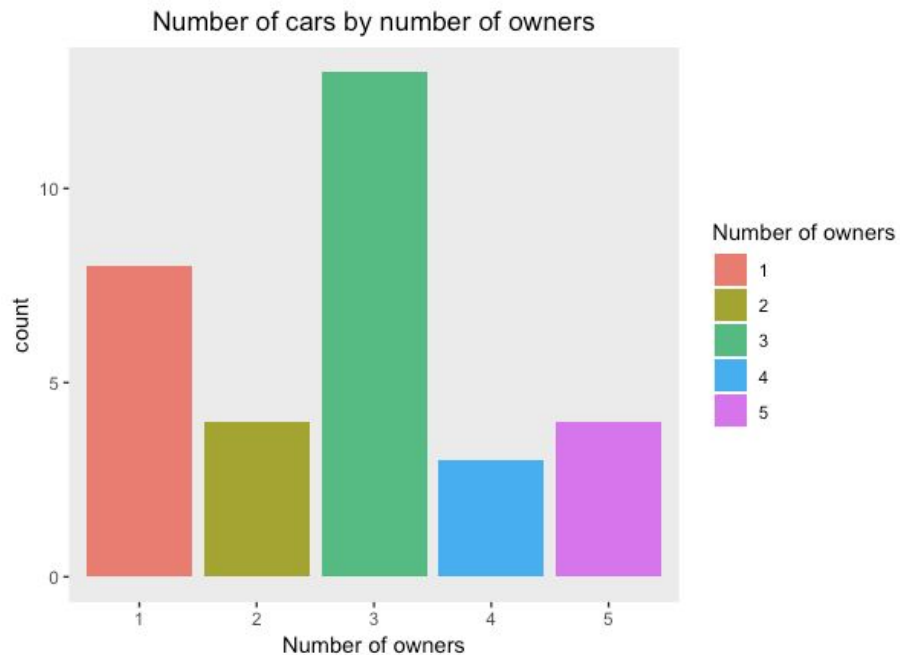
Number of cars by number of owners



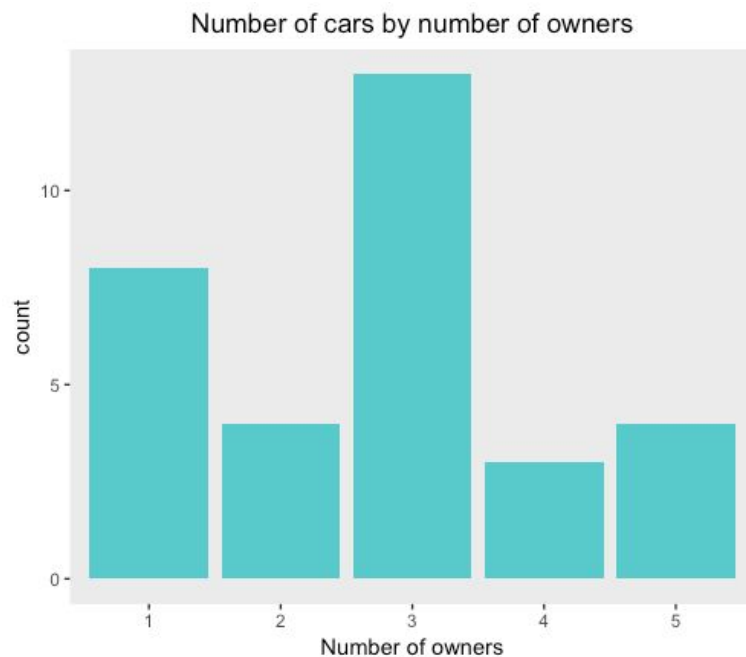
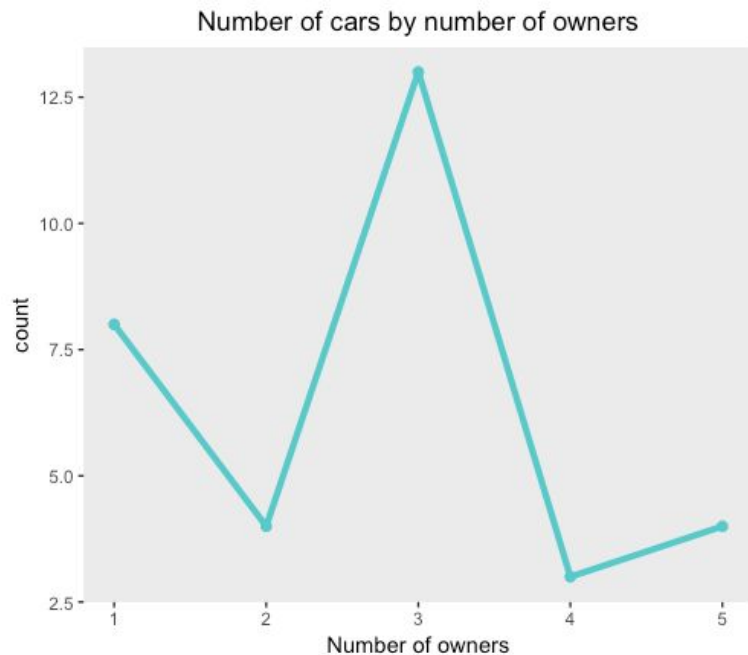
Number of owners



Which one do you prefer?



Which one do you prefer?



Which one do you prefer?

| Purpose | Explore | Report | Persuade |
|------------------------|--------------------------------|-------------------------|----------------------------------|
| Information about data | What is the data distribution? | What is the data trend? | Why do we have the trend? |
| Data modelling | How should I model the data? | What is the projection? | Why should we do A instead of B? |
| Missing data | Is there missing data | Already taken care of | Already taken care of |

Alternative Visualization Tools (open-source or free) traveloka



Metabase



Power BI



Google Data Studio

QUESTIONS?

traveloka

