



# Data Visualization

With Python



# What makes good data visualization?

- Provide Context
- Use the right charts
- Less is More



# Provide Context

## Audience Targeting

- Who's the audience and what do they need to know?
- With every graph, there should be a CTA for them

## Exploratory vs explanatory analysis

- Exploratory is finding information from data, infinite graphs possible
- Explanatory is choosing the relevant ones from them

# Choose the right visualisation

91%

Simple text

	A	B	C
Category 1	15%	22%	42%
Category 2	40%	36%	20%
Category 3	35%	17%	34%
Category 4	30%	29%	26%
Category 5	55%	30%	58%
Category 6	11%	25%	49%

Table

	A	B	C
Category 1	15%	22%	42%
Category 2	40%	36%	20%
Category 3	35%	17%	34%
Category 4	30%	29%	26%
Category 5	55%	30%	58%
Category 6	11%	25%	49%

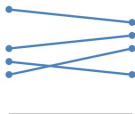
Heatmap



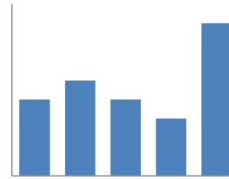
Scatterplot



Line



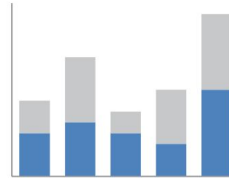
Slopegraph



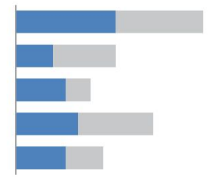
Vertical bar



Horizontal bar



Stacked vertical bar



Stacked horizontal bar

Source: Storytelling with Data



# Choose the right visualisation

Visualization Purpose	Description	Recommended Chart Type
<b>Comparisons</b>	You are trying to compare different values in your data set for e.g. which channel brought you the most traffic?	Bar Chart, Column Chart, Line Chart
<b>Trends</b>	You are trying to plot the trends in your data set for e.g. has our summer campaign increased sales in the last six months	Line Chart, Column Chart
<b>Correlations</b>	You are trying to map relationships between variables e.g. Ad spend and number of visits	Scatter Plot
<b>Part-to-Whole</b>	You need to show the device breakdown of your site visitors. Think Pie Chart	Pie Chart

Source: [CardinalPath](#)



# Less is more

- [Improve data to ink ratio](#)
- Keep it crisp and to the point
- Clutter is your enemy
- Reduce Cognitive Overload (Sorting, scaling and identifying relationships)
- Empower the user



# Popular Visualization Tools

- [Matplotlib](#)
- [Seaborn](#)
- [Plotly](#)



# DEMO

Visualization with Plotly





# Activity

Step 1: Download Netflix data from [here](#)

Step 2:

- Identify the persona of the stakeholders(Max. 10 min)
- Identify the questions relevant for the stakeholders that can be answered through the data(Min. 4)
- Create appropriate visuals to communicate the answers to the stakeholders



# Helpful Links

- <https://towardsdatascience.com/the-next-level-of-data-visualization-in-python-dd6e99039d5e>
- <https://www.kaggle.com/kanncaa1/plotly-tutorial-for-beginners>