

Meeting #8

Data visualization

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DATA VISUALIZATION



STORYTELLING

“Data storytelling is the art of presenting data with a contextual narrative” (Microsoft).

[What is Data Storytelling and Data Storytelling Examples](#)
| Microsoft Power BI

Data storytelling can help build credibility with data-driven insights and visualisations. Learn about data storytelling with tips and examples.



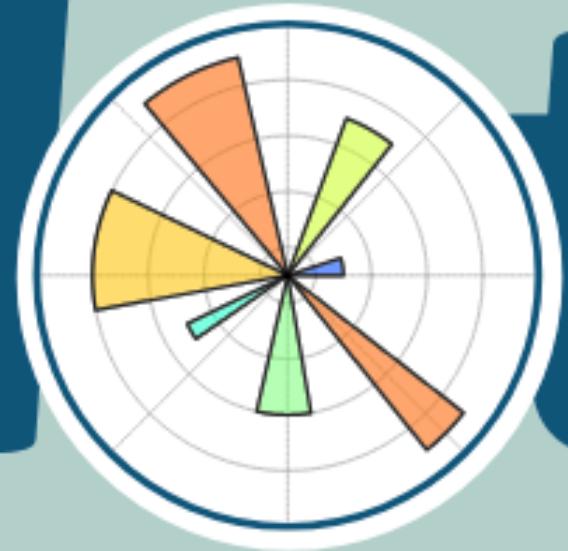
/

Benefits

- Simplifies complex data
- Reveals patterns and trends
- Aids in decision making
- Improves retention and engagement
- Increases accessibility
- Real-time monitoring
- Identify areas that need attention or improvement
- Predictive analysis

With...

matplotlib



Data visualization

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Data visualization

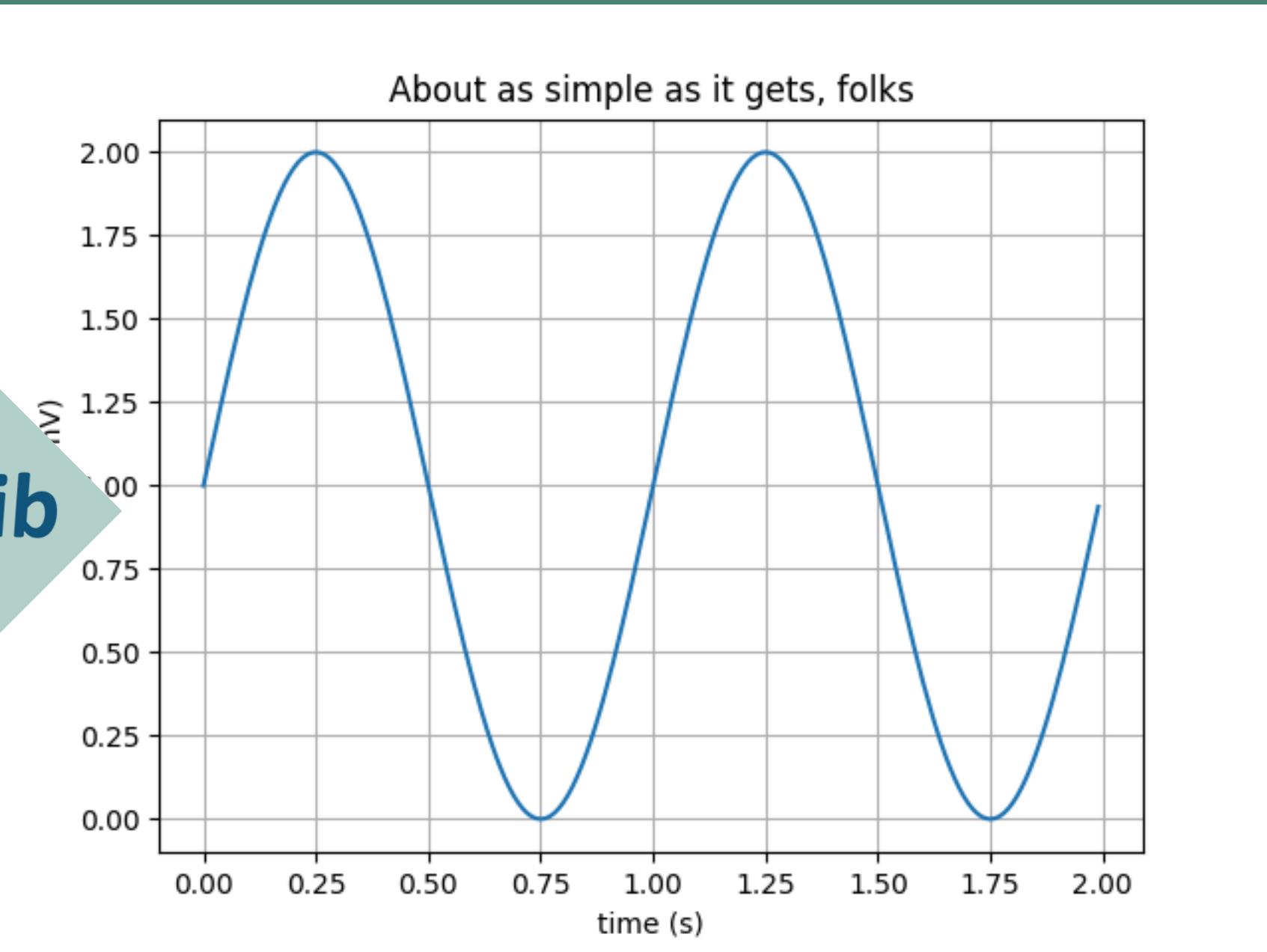
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The matplotlib logo, featuring the word "matplotlib" in a blue sans-serif font with a small orange circular icon containing a multi-colored sunburst or radar chart graphic positioned above the letter "o".

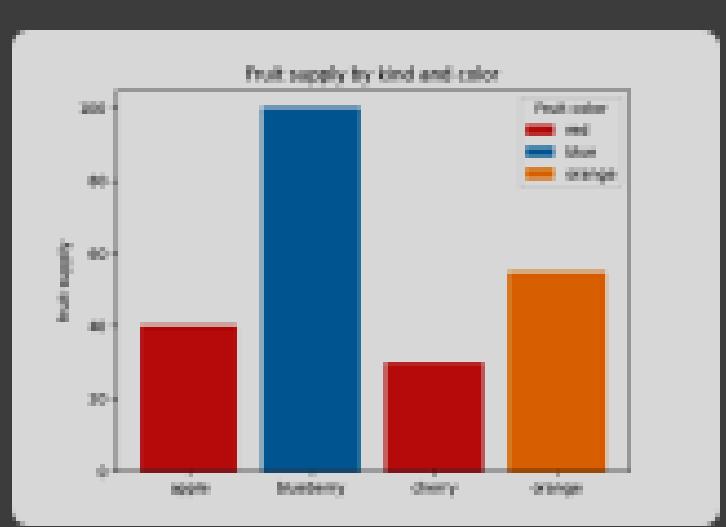
Data visualization

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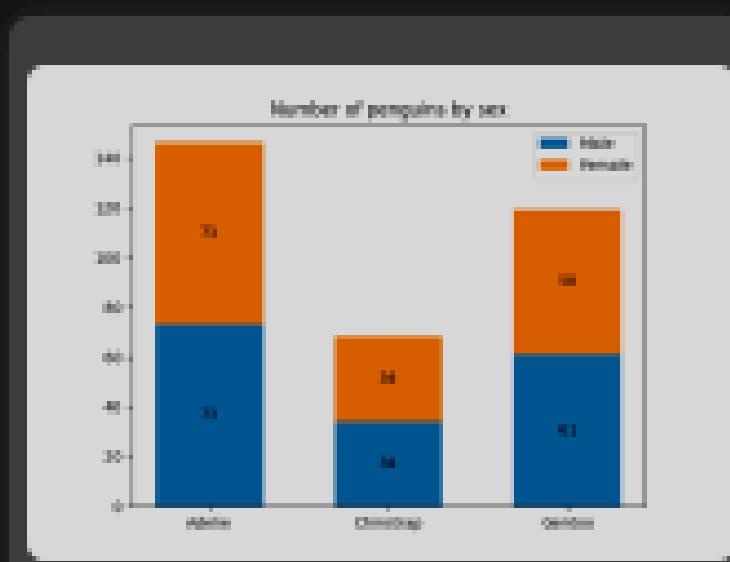
matplotlib



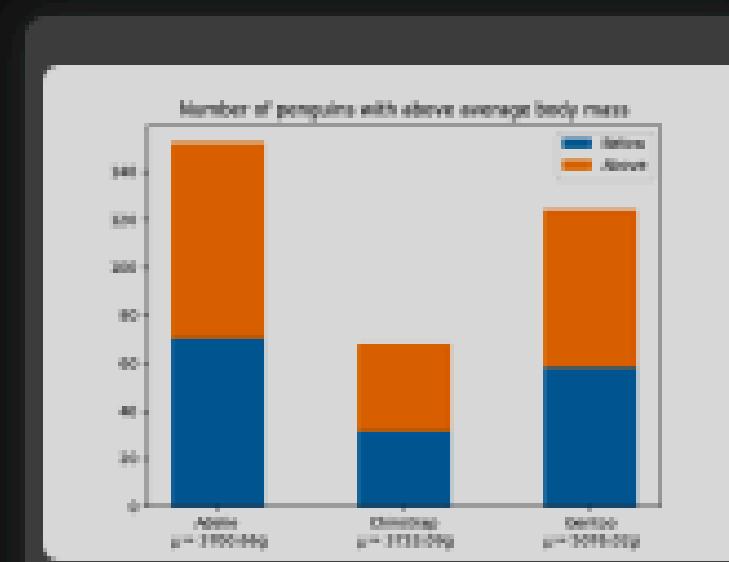
Matplotlib examples!



Bar color demo



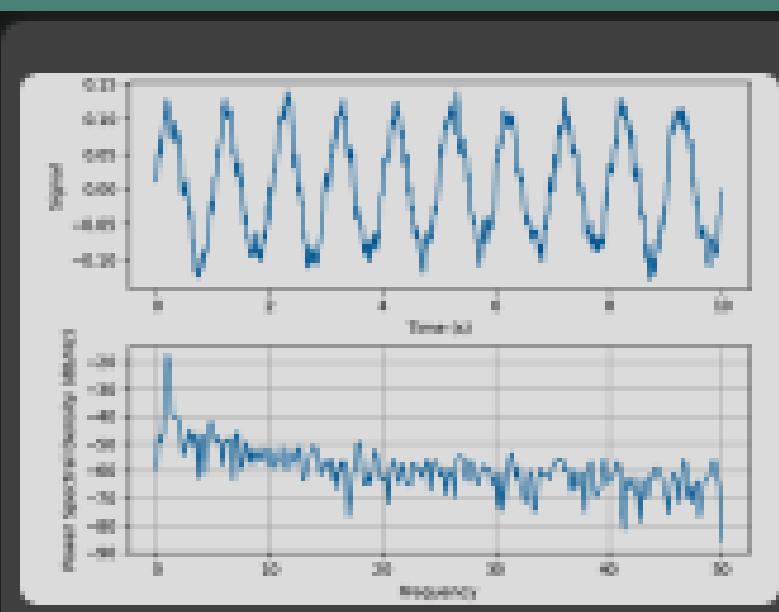
Bar Label Demo



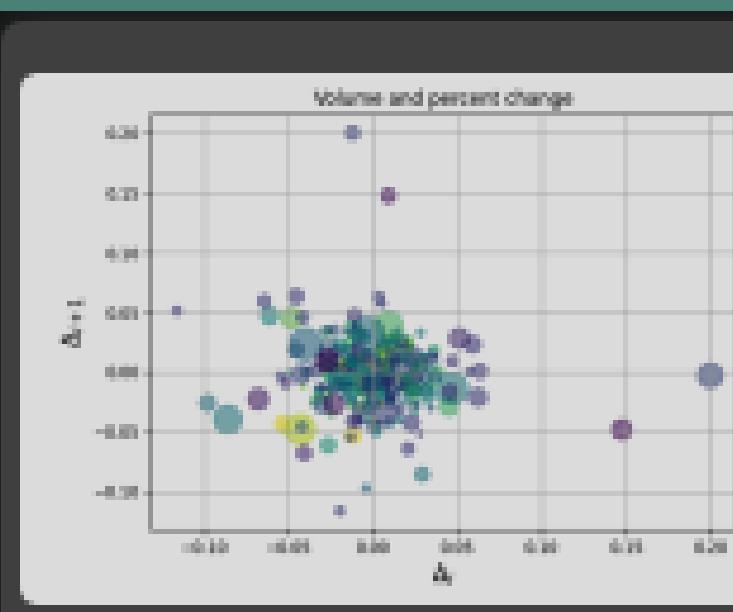
Stacked bar chart



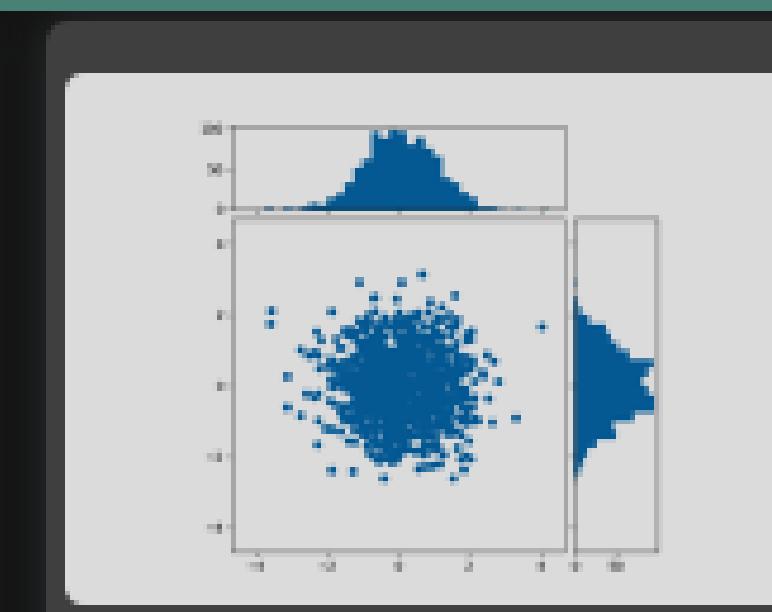
Grouped bar chart
with labels



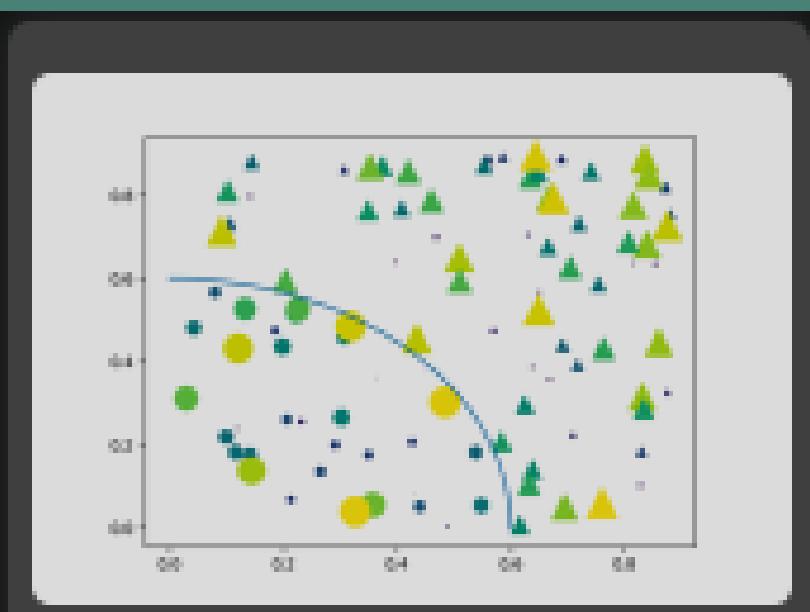
Power spectral
density (PSD)



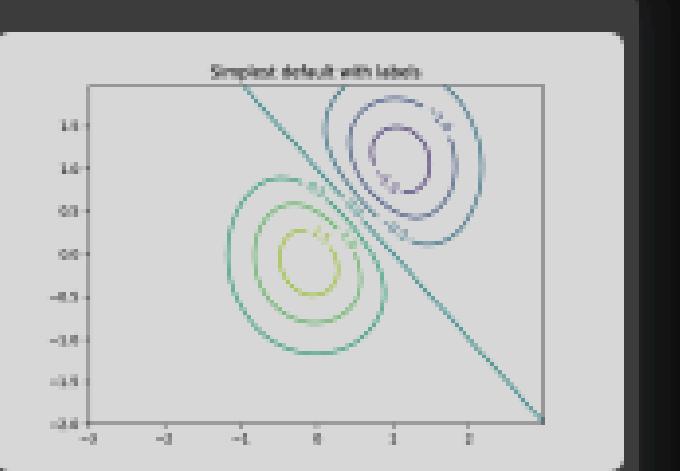
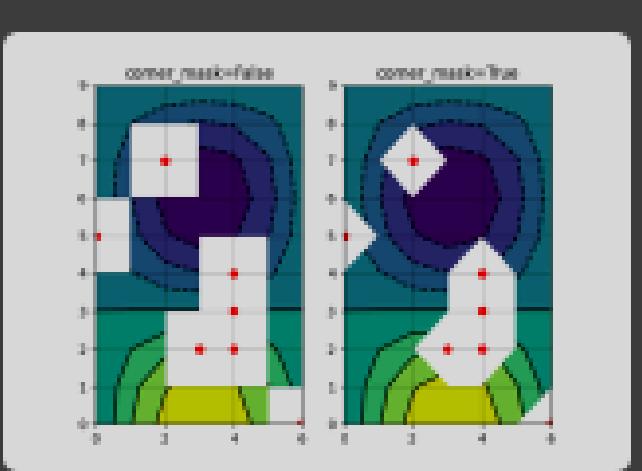
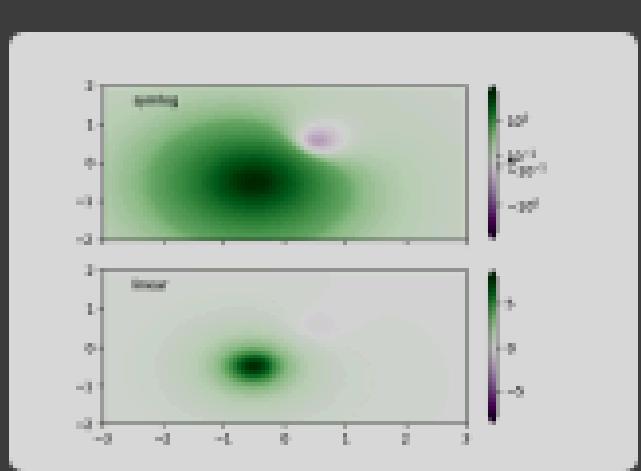
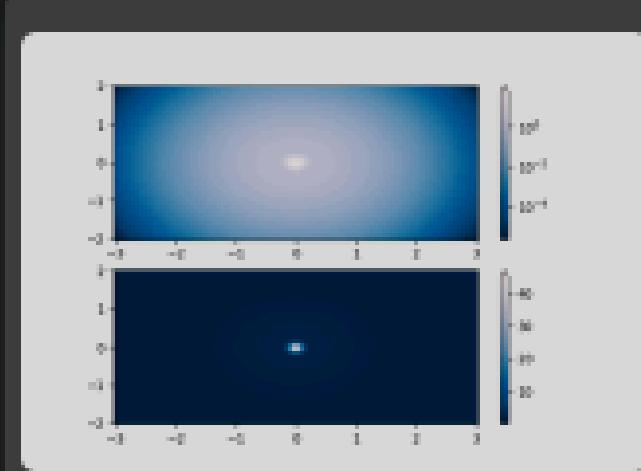
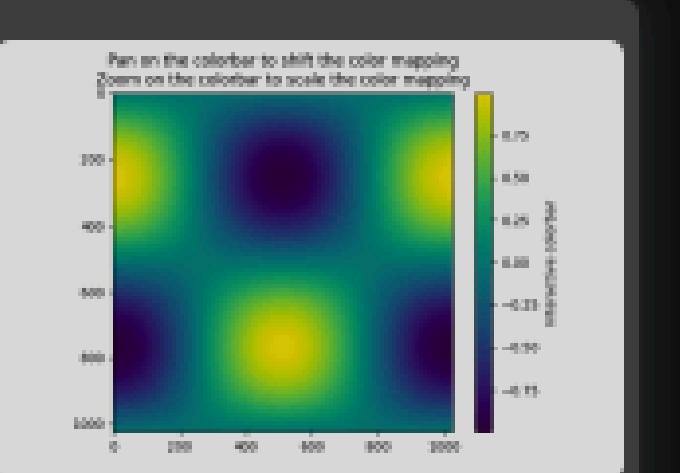
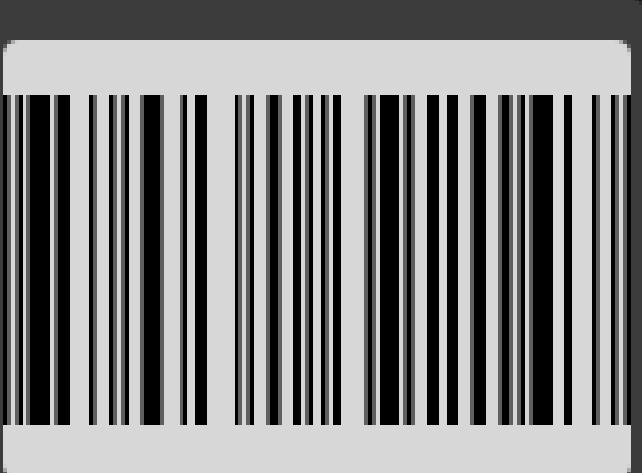
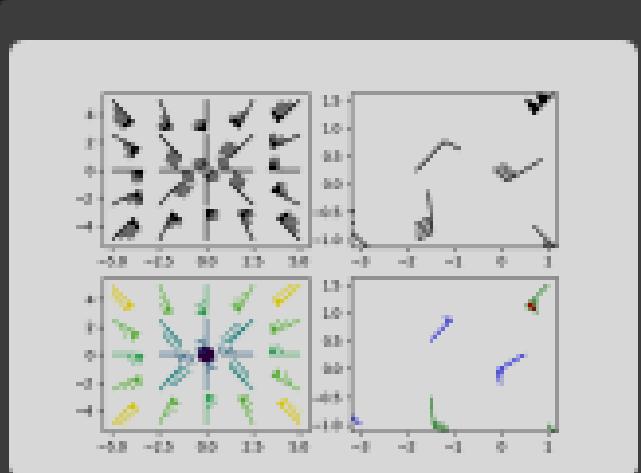
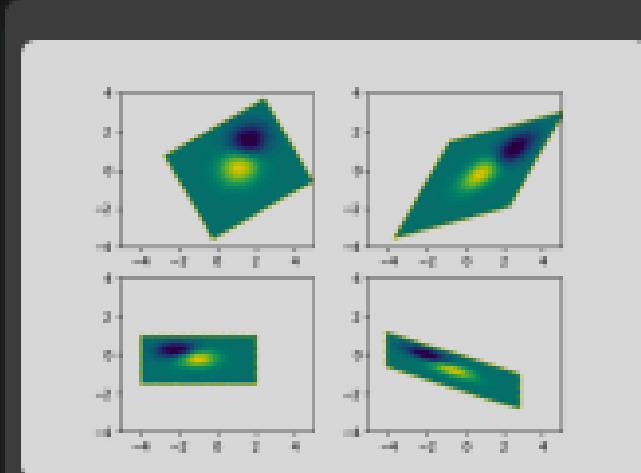
Scatter Demo2

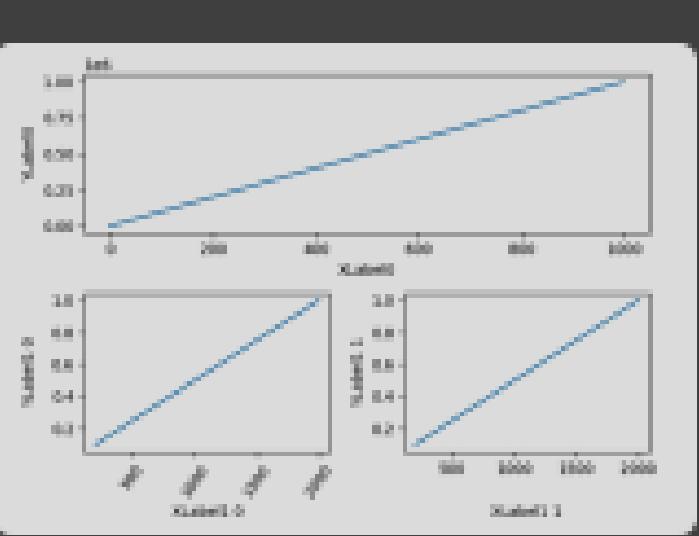


Scatter plot with
histograms

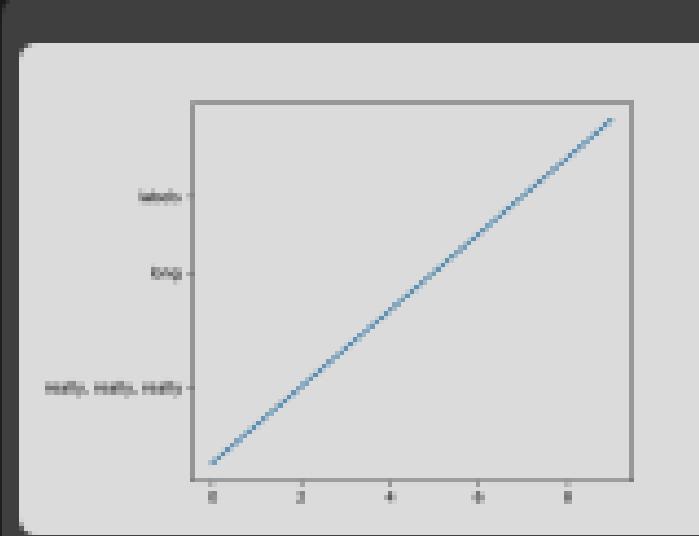


Scatter Masked

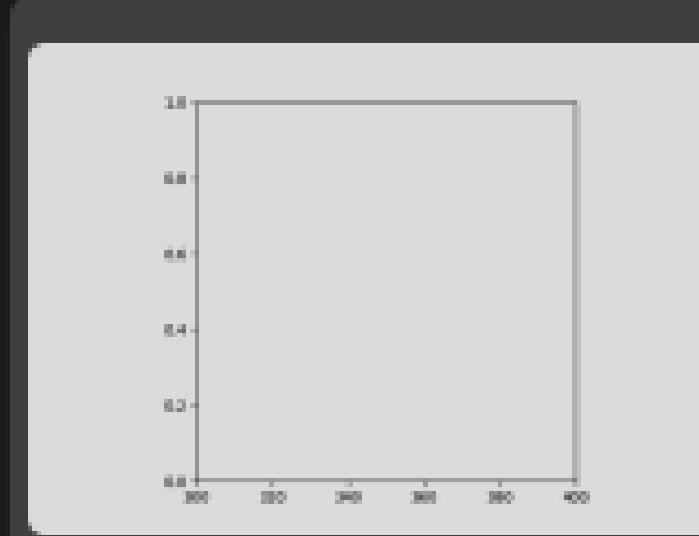




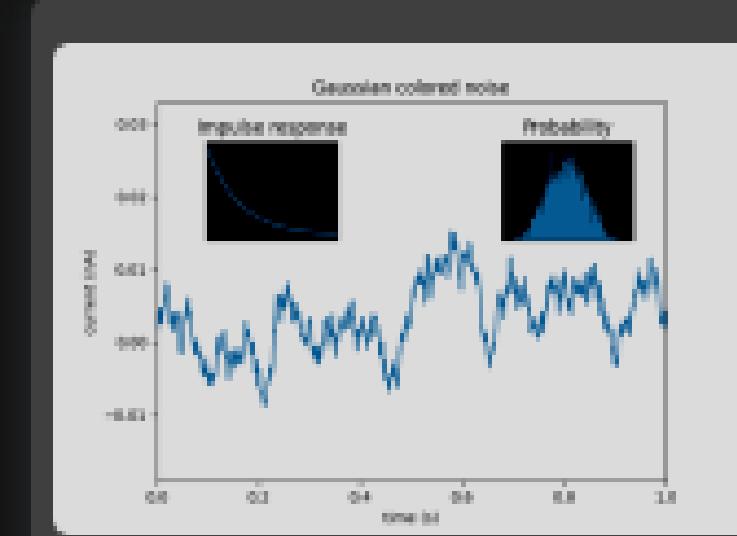
Aligning Labels



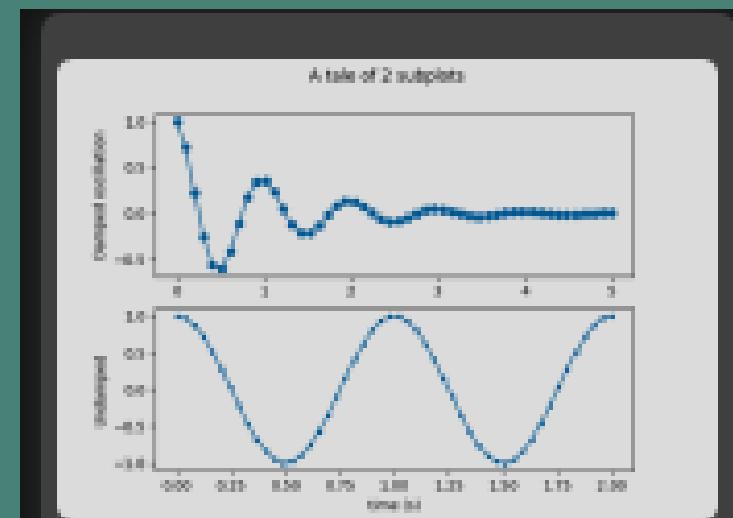
Programmatically
controlling subplot
adjustment



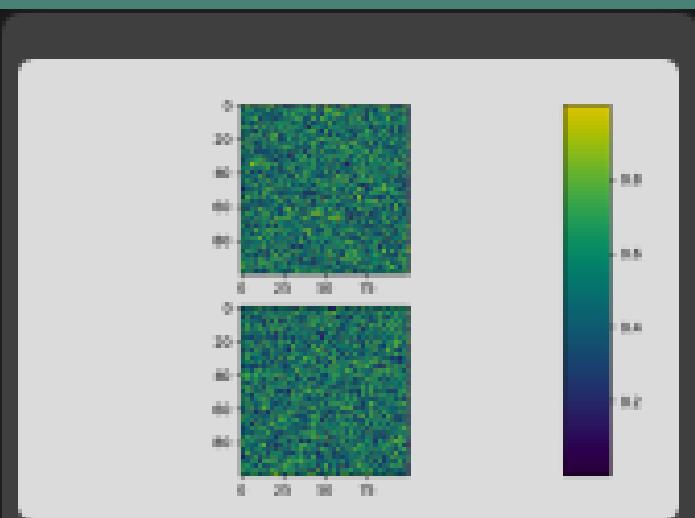
Axes box aspect



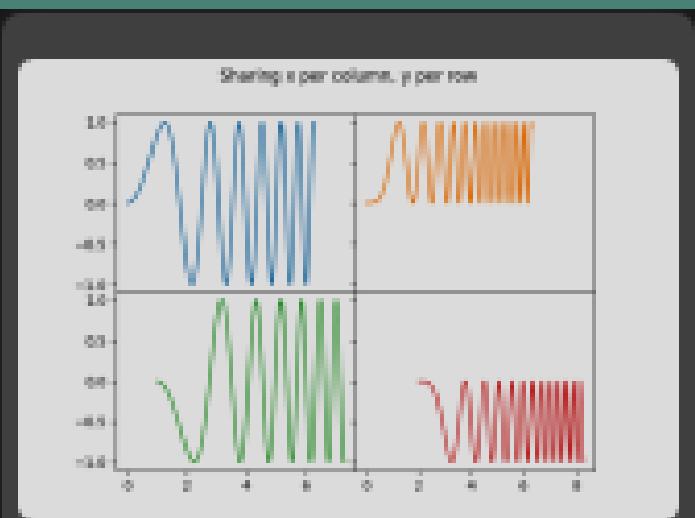
Axes Demo



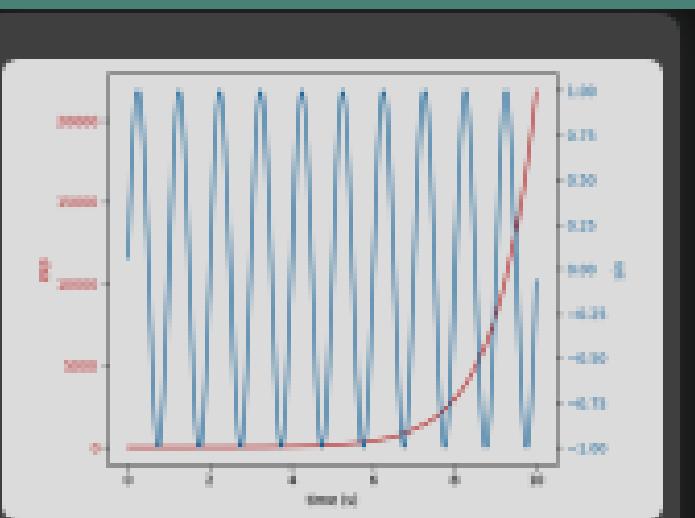
Multiple subplots



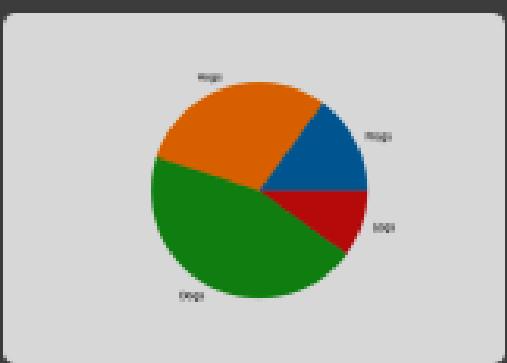
Subplots spacings
and margins



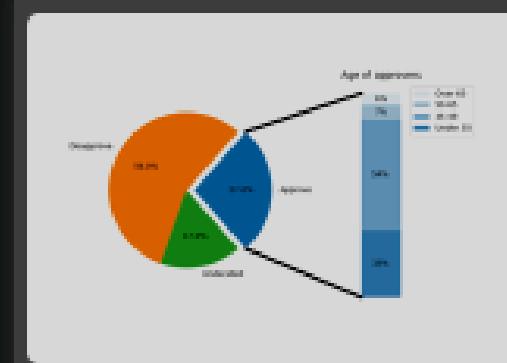
Creating multiple
subplots using
plt.subplots



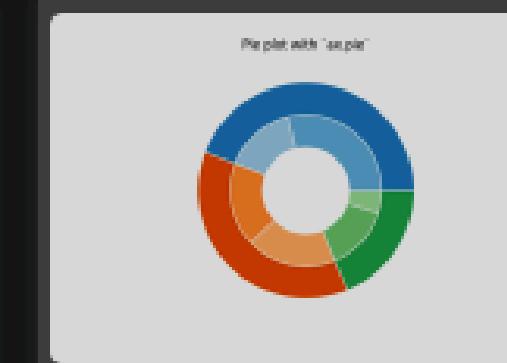
Plots with different
scales



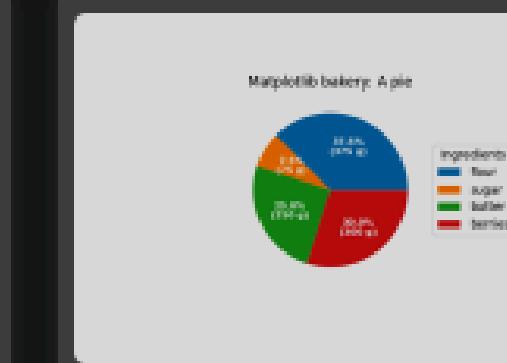
Pie charts



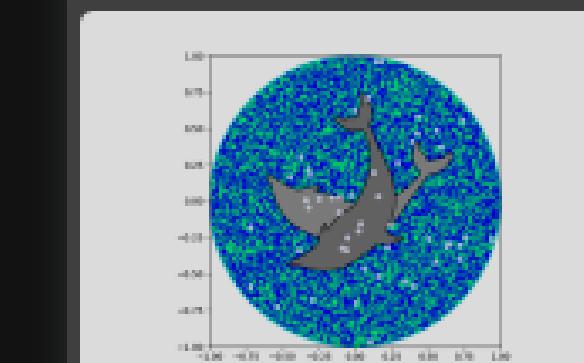
Bar of pie



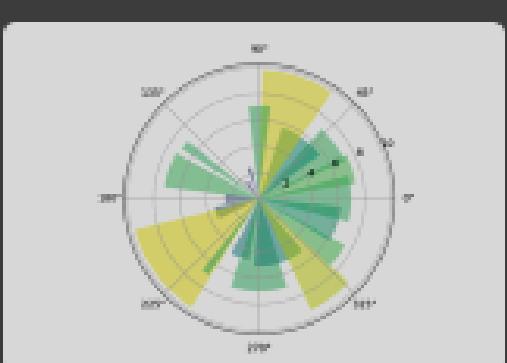
Nested pie charts



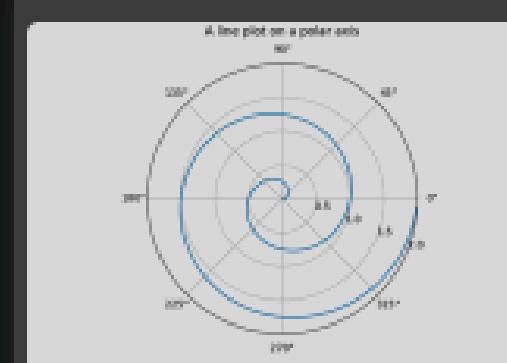
Labeling a pie and a
donut



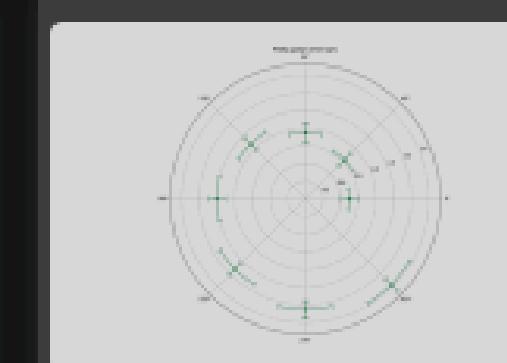
Dolphins



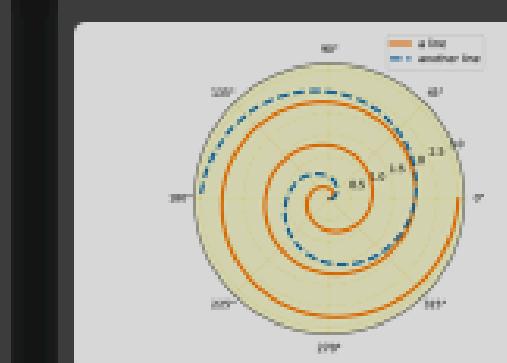
Bar chart on polar
axis



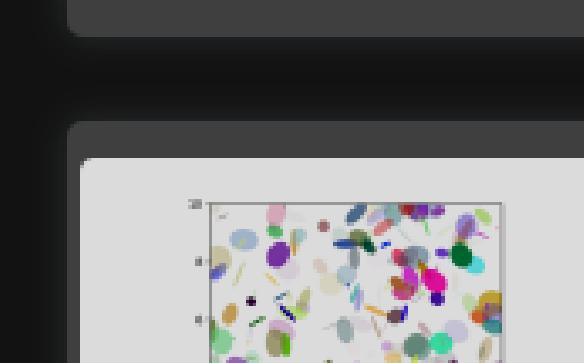
Polar plot



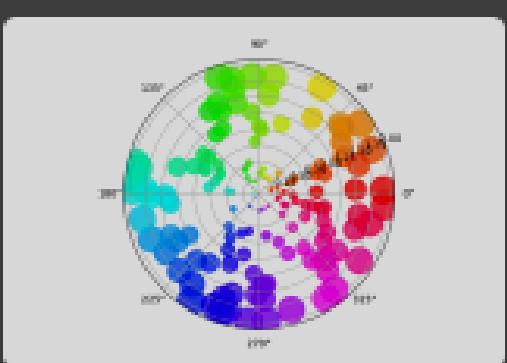
Error bar rendering
on polar axis



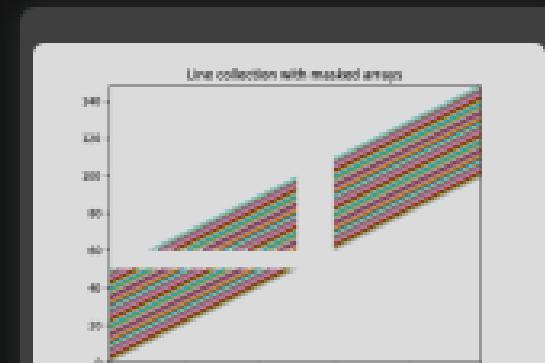
Polar legend



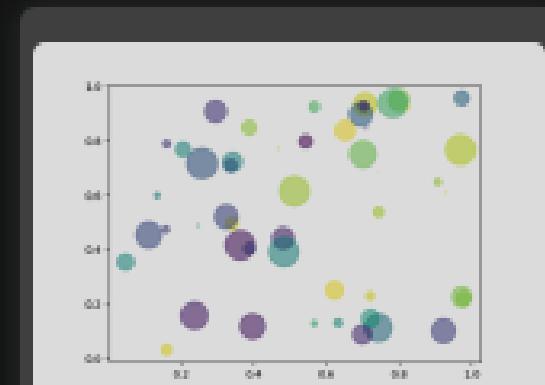
Ellipse Demo



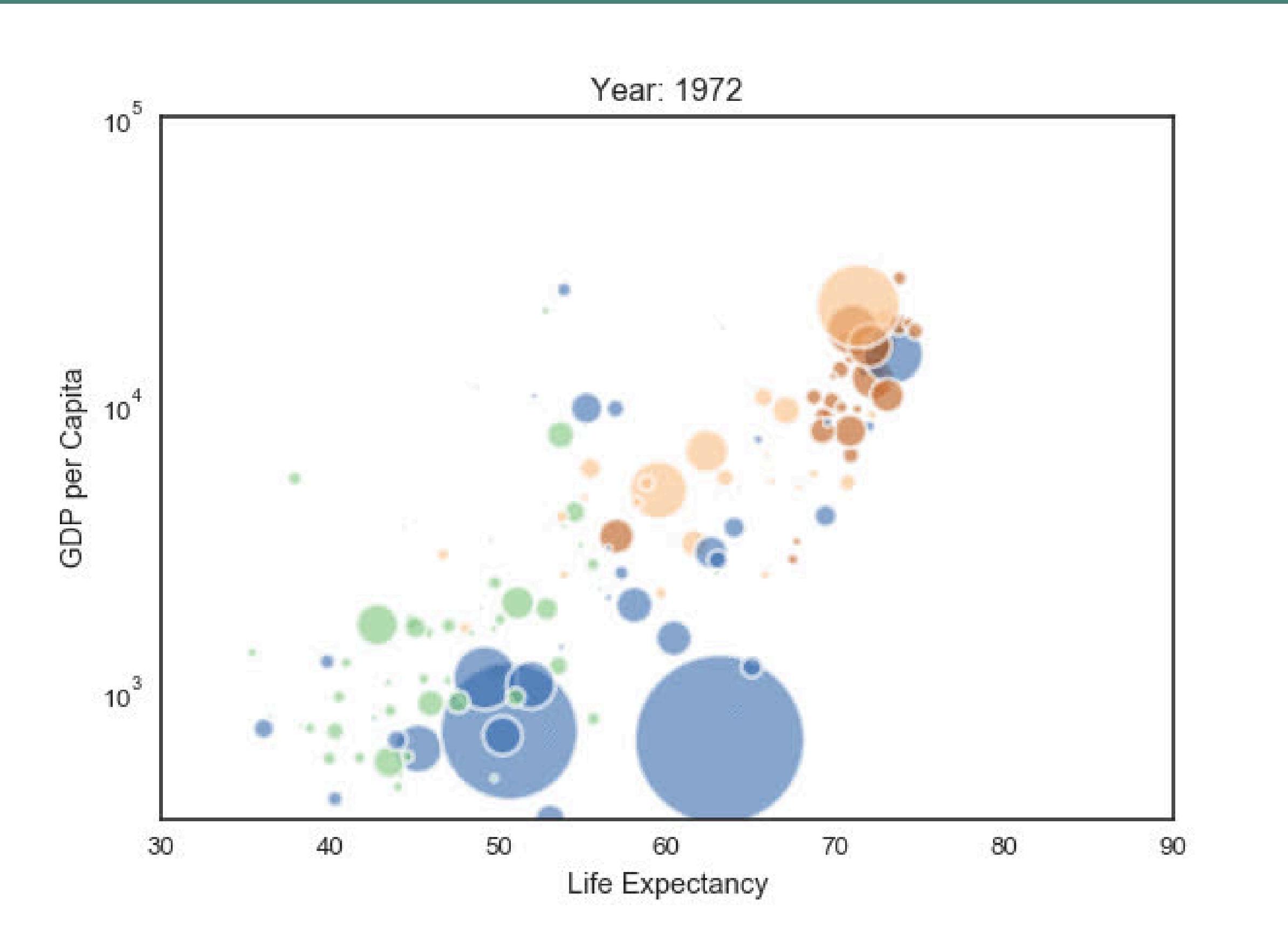
Scatter plot on polar
axis

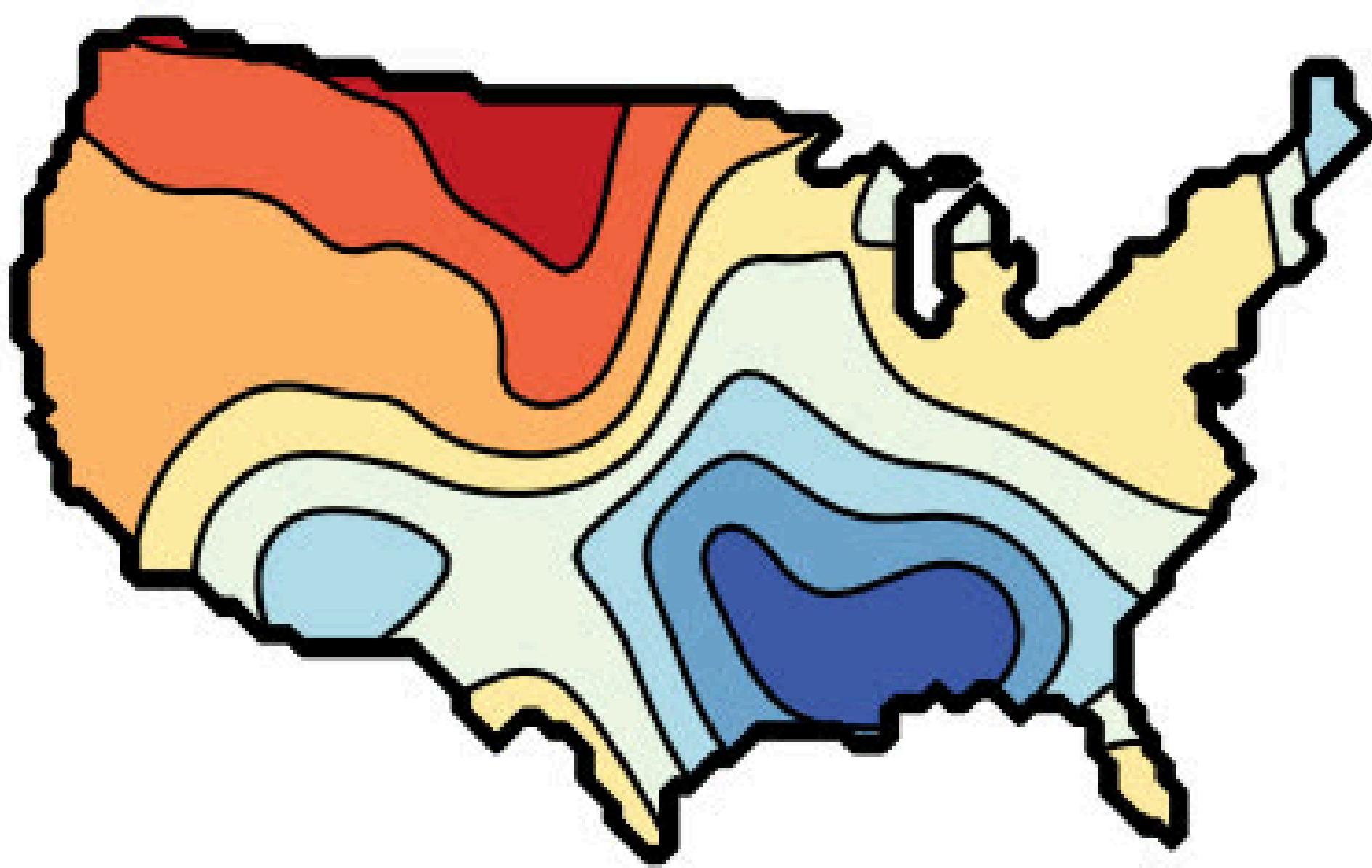


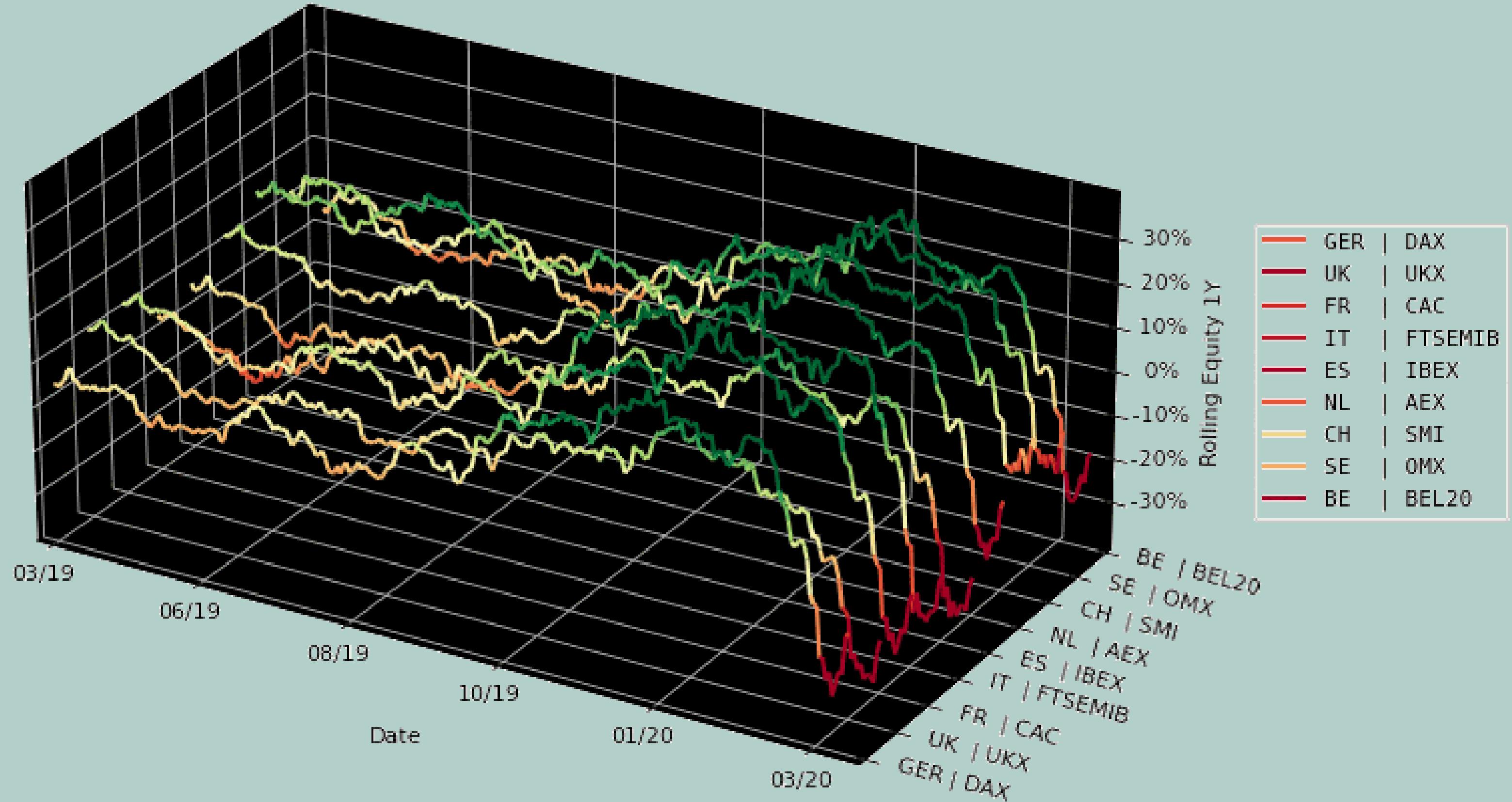
Plotting multiple
lines with a
LineCollection

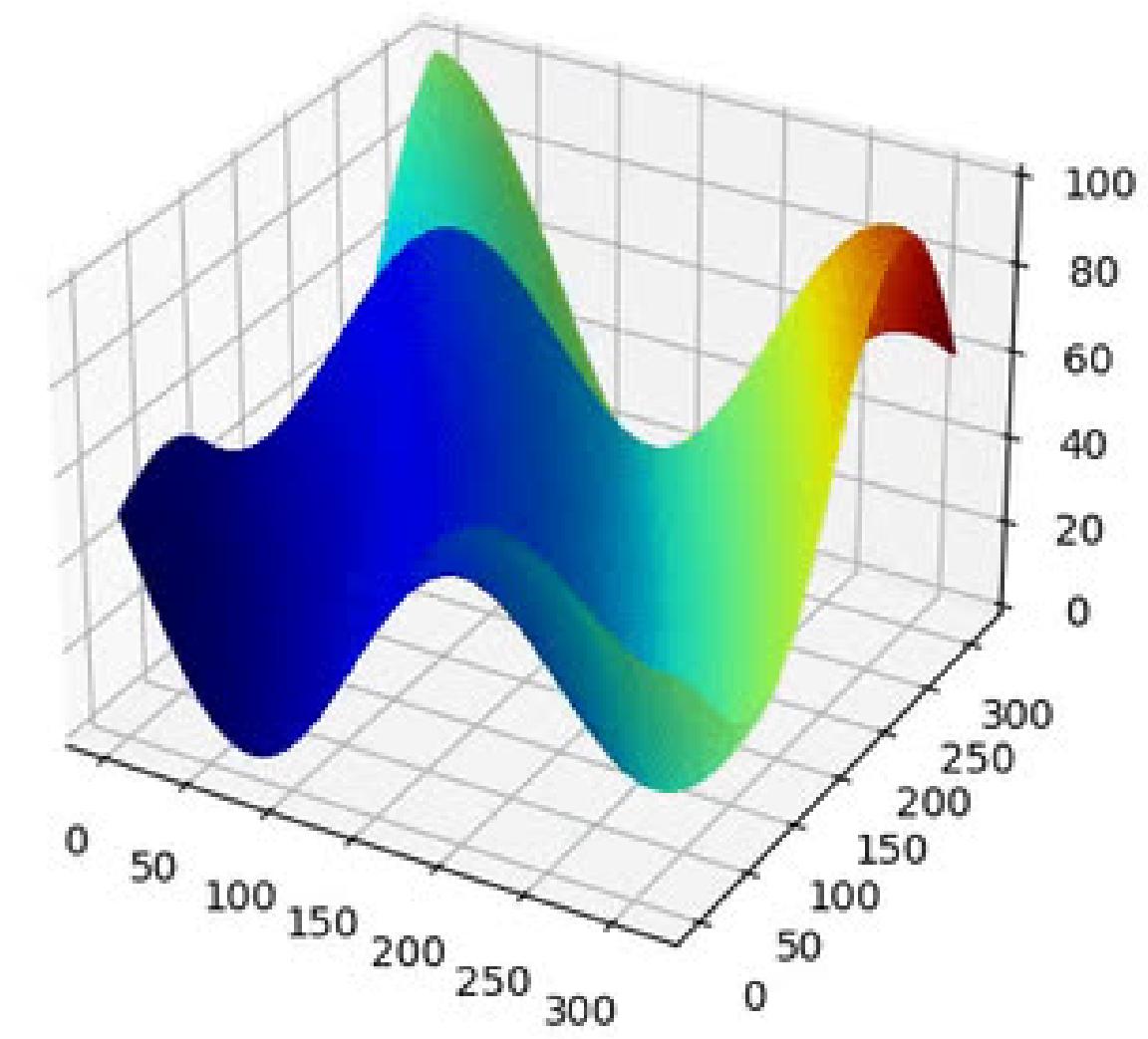
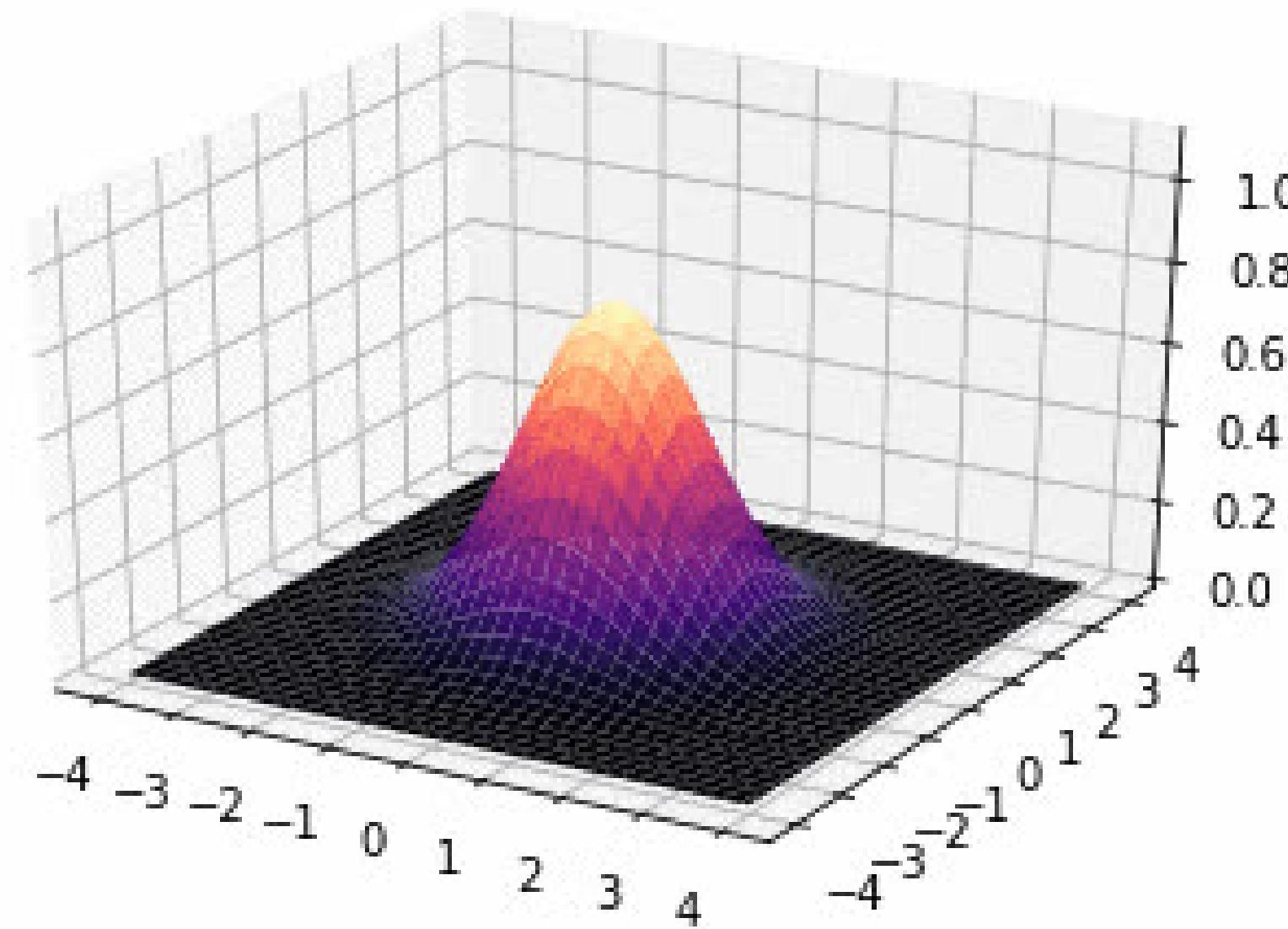


Scatter plot





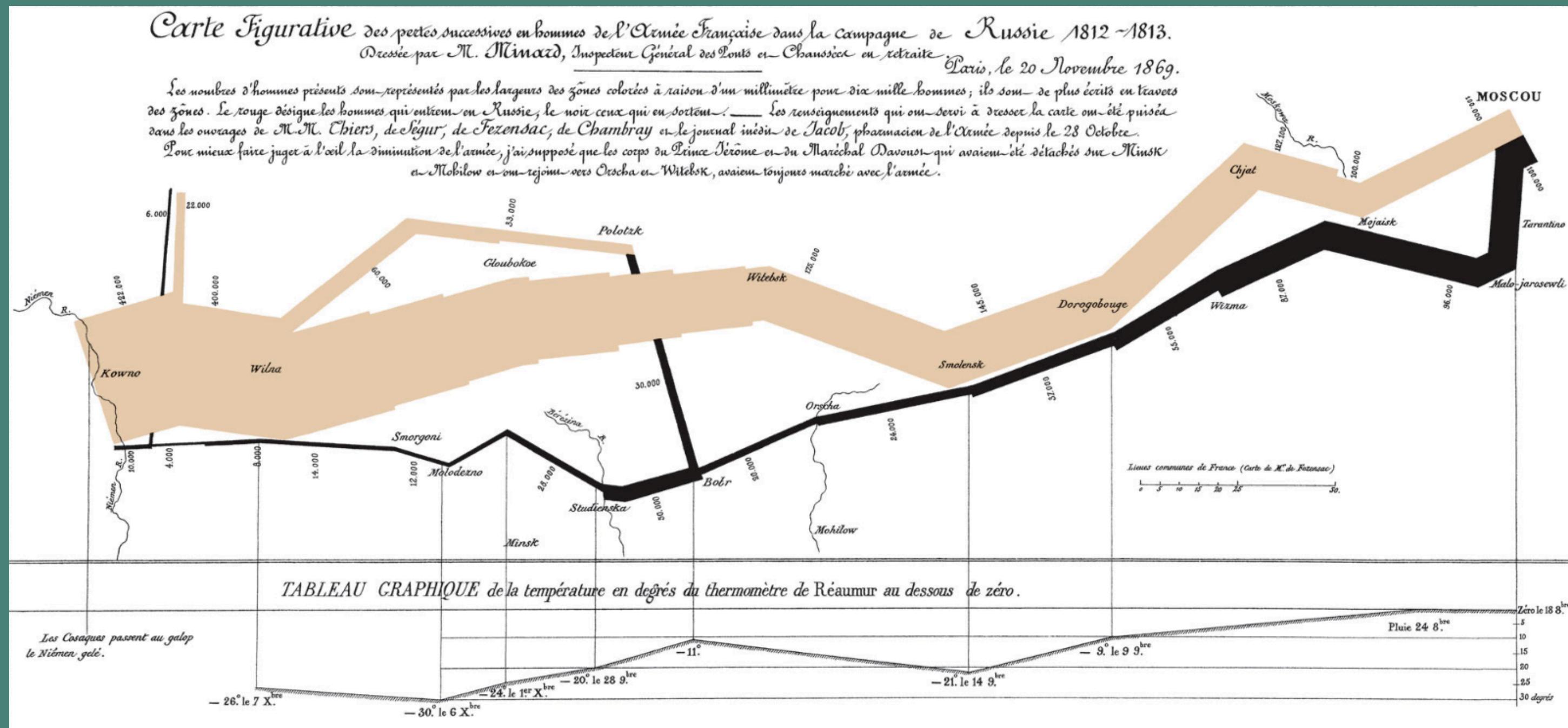




Real-life examples using data visualization

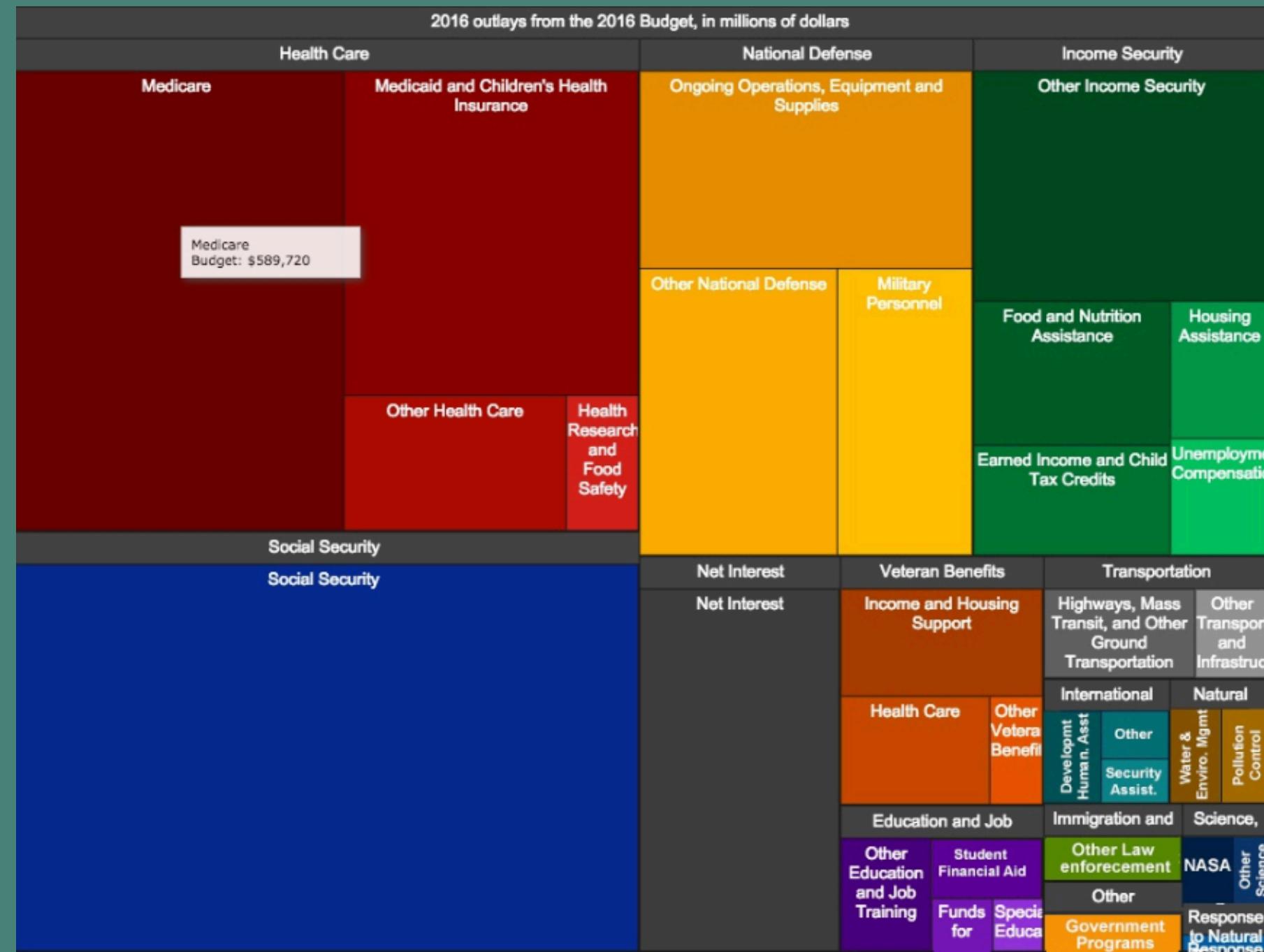
(which are honestly so cool)

1. Napoleon March Map



Charles Joseph Minard

2. US Government Budget

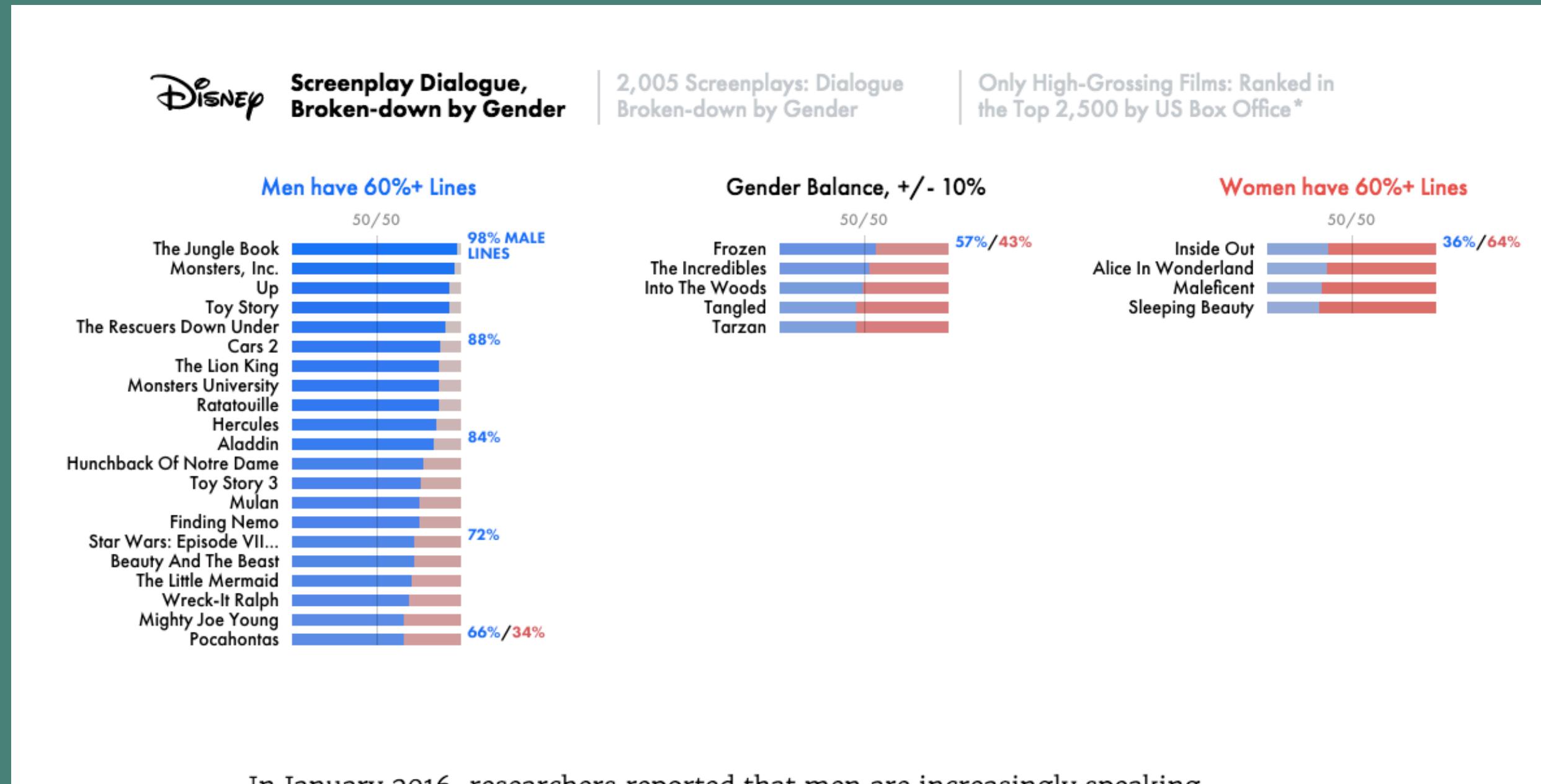


3. Every Upcoming Solar Eclipse (until 2080)



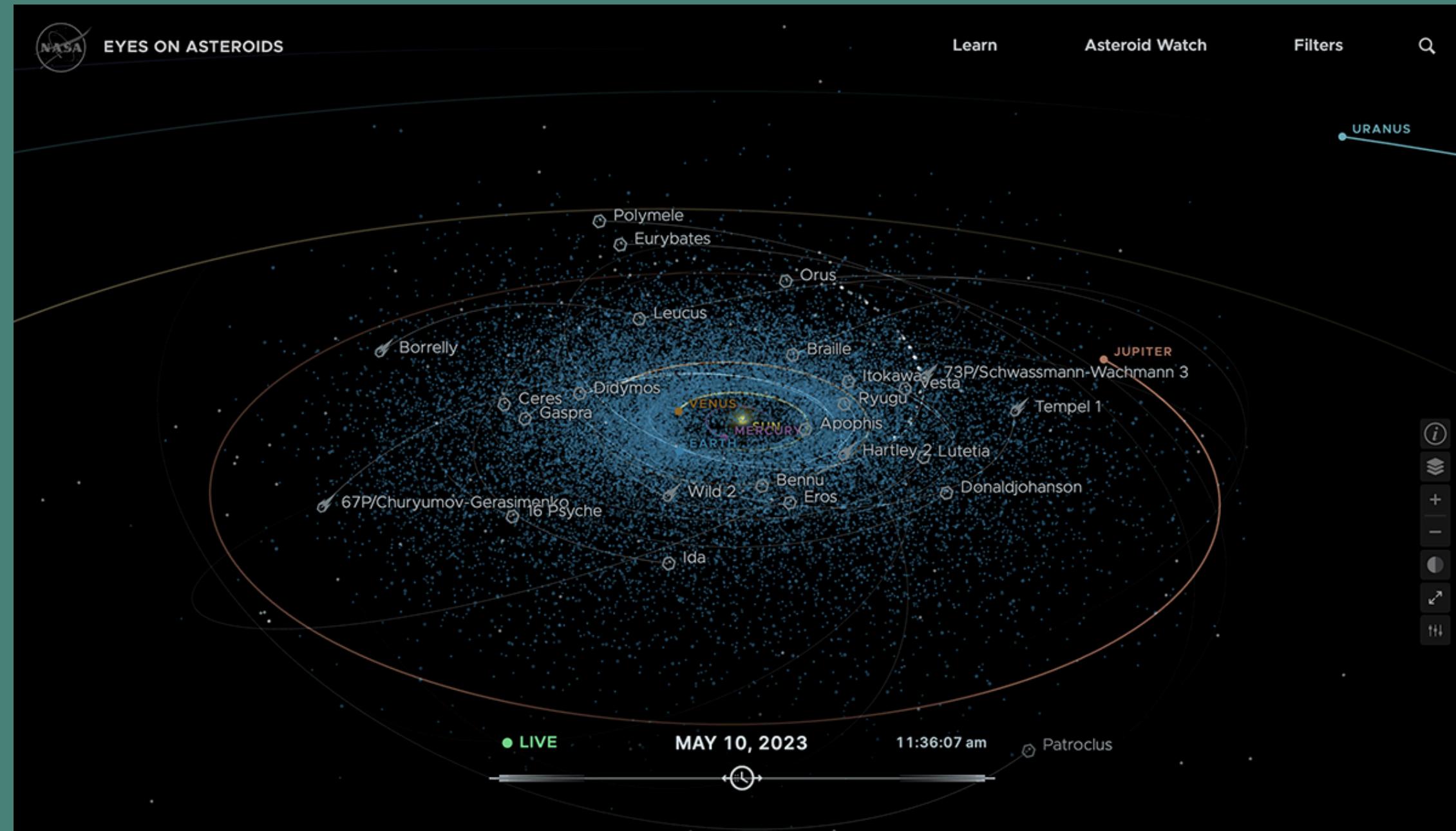
Denise Lu

4. Film dialogue divided by gender



Hanah Anderson, Matt Daniels

5. Asteroids in the Solar System



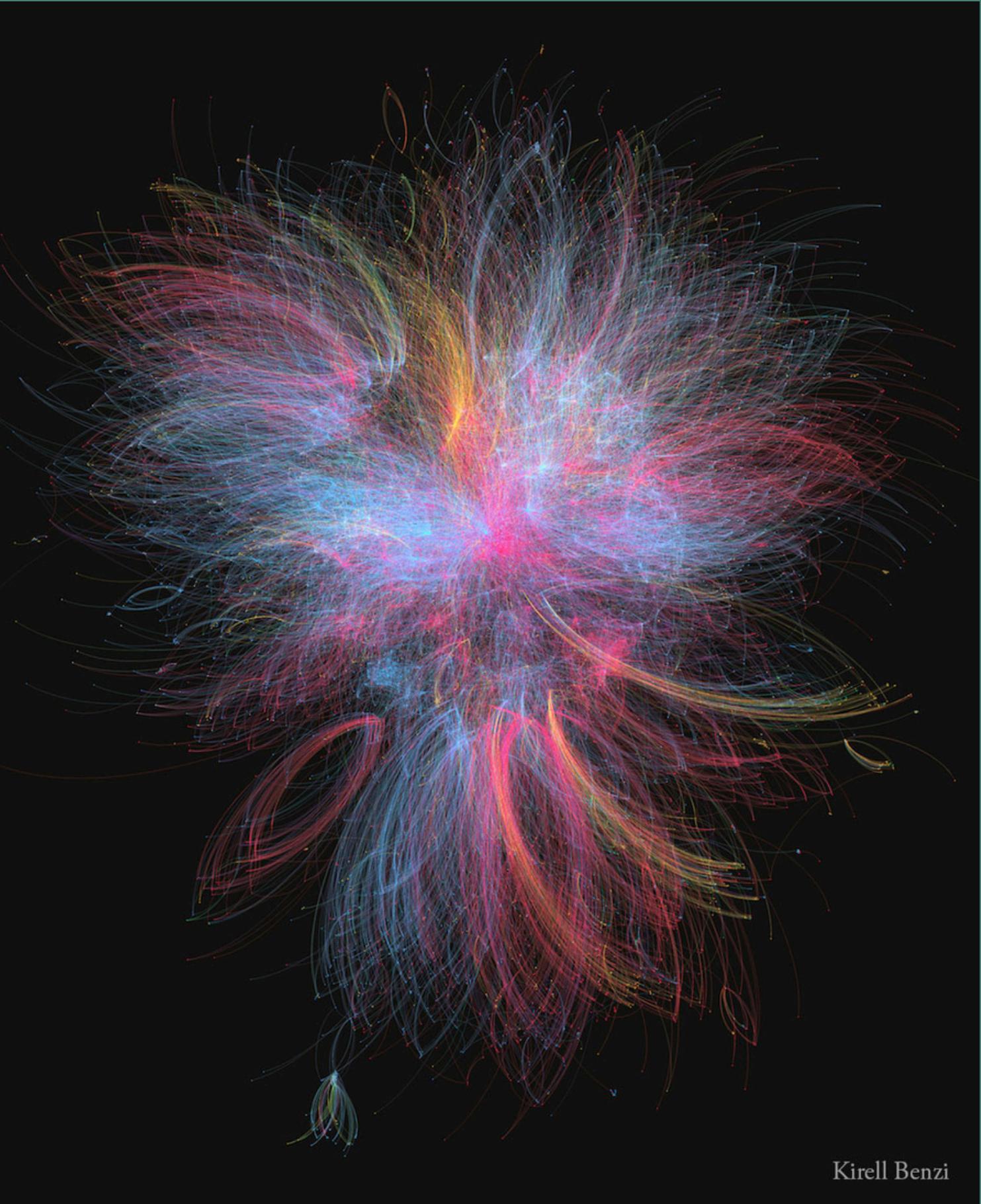
NASA

6. Character interactions in Star Wars

Red represents the dark side of the force; blue represents the light side; yellow shows criminals and bounty hunters

**20K+ characters
66K+ connections**

Kirill Benzi



Kirill Benzi

7. Population Density in Europe



Alasdair Rae



UPCOMING NEXT...

LET'S
CODE!!