

Data Visualization


HANDS-ON VISUALIZATIONS IN PYTHON

Required Python libraries

We will be using

- jupyter 1.0.0
- numpy 1.15.4
- pandas 0.23.4
- pandas_profiling 2.3.0
- matplotlib 3.0.2
- seaborn 0.9.0
- plotly 3.4.2
- networkx 2.2
- geopandas 0.6.2

Installing geopandas can be non-trivial (if you have difficulties, try uninstalling the fiona package and then reinstalling geopandas)



You probably do not need the exact same version...

Test Python libraries

For Jupyter notebooks, write the following in a terminal

```
jupyter notebook
```

In the Jupyter notebook, write

```
import numpy
import pandas
import pandas_profiling
import matplotlib
import seaborn
import plotly
import networkx
import geopandas
```

Inkscape

An editor for vector graphics (like Adobe Illustrator)

Free software

Cross-platform software

Download from <https://inkscape.org> or <https://github.com/valerioa/Inkscape-MacOS-Curated-Build/releases> (for Macs)



Overview

Styles and colors in matplotlib

The Eurovision Song Contest (ESC)

EUROVISION

SONG CONTEST

International song competition

Based upon the Sanremo Music Festival

Organized every year since 1956

One of the most watched non-sporting events (between 100 million and 600 million viewers)

Several voting and qualifying systems

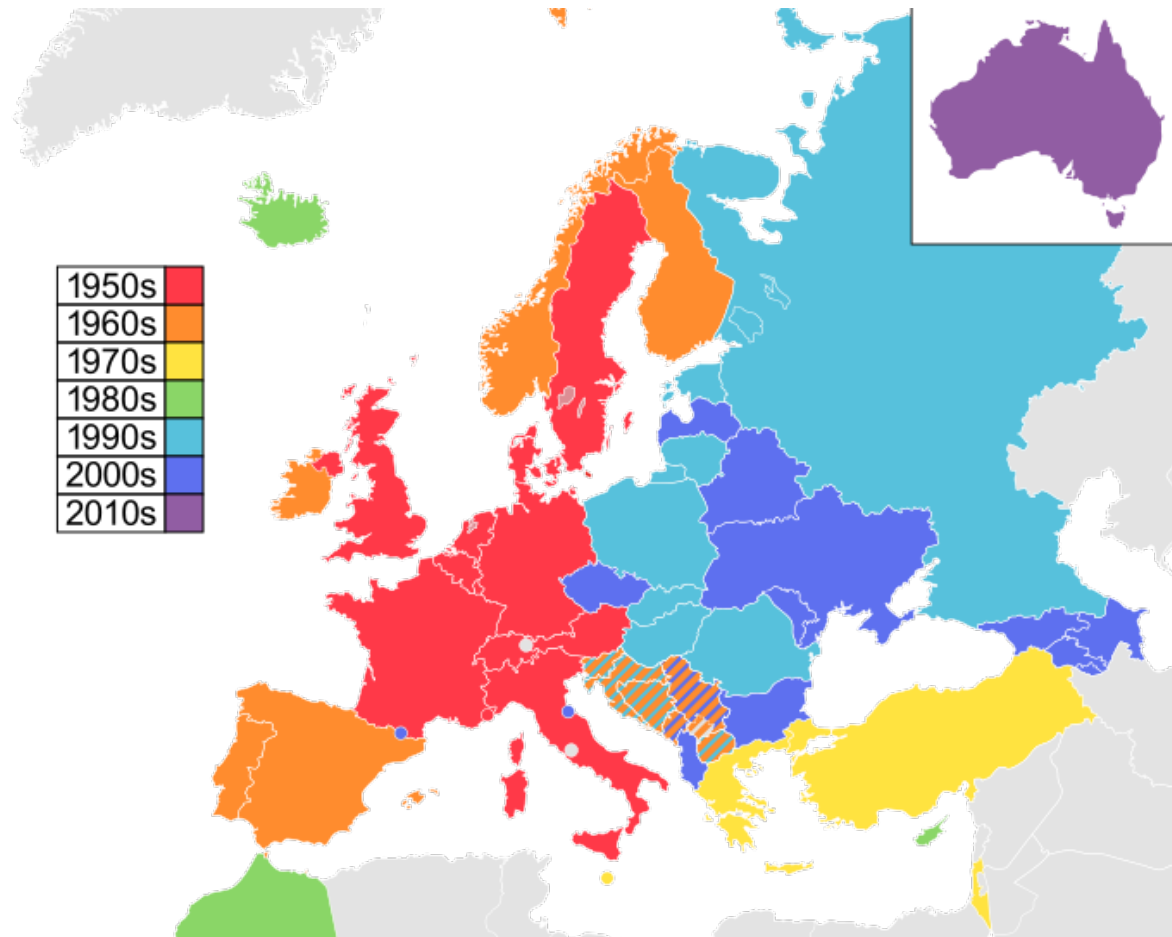
- Since 1993 various systems to limit the number of countries
- Semi-final introduced in 2004
- Since 2008 two semi-finals

EUROVISION

SONG CONTEST



Competing countries



Overview

Styles and colors in matplotlib

The Eurovision Song Contest (ESC)

- Reading in and parsing the data
- How many countries have competed in the ESC through the years?
- How well are the “big five” countries doing?
- Is there any “neighbor bias” in the votes?
- Visualize the countries’ success on a map