

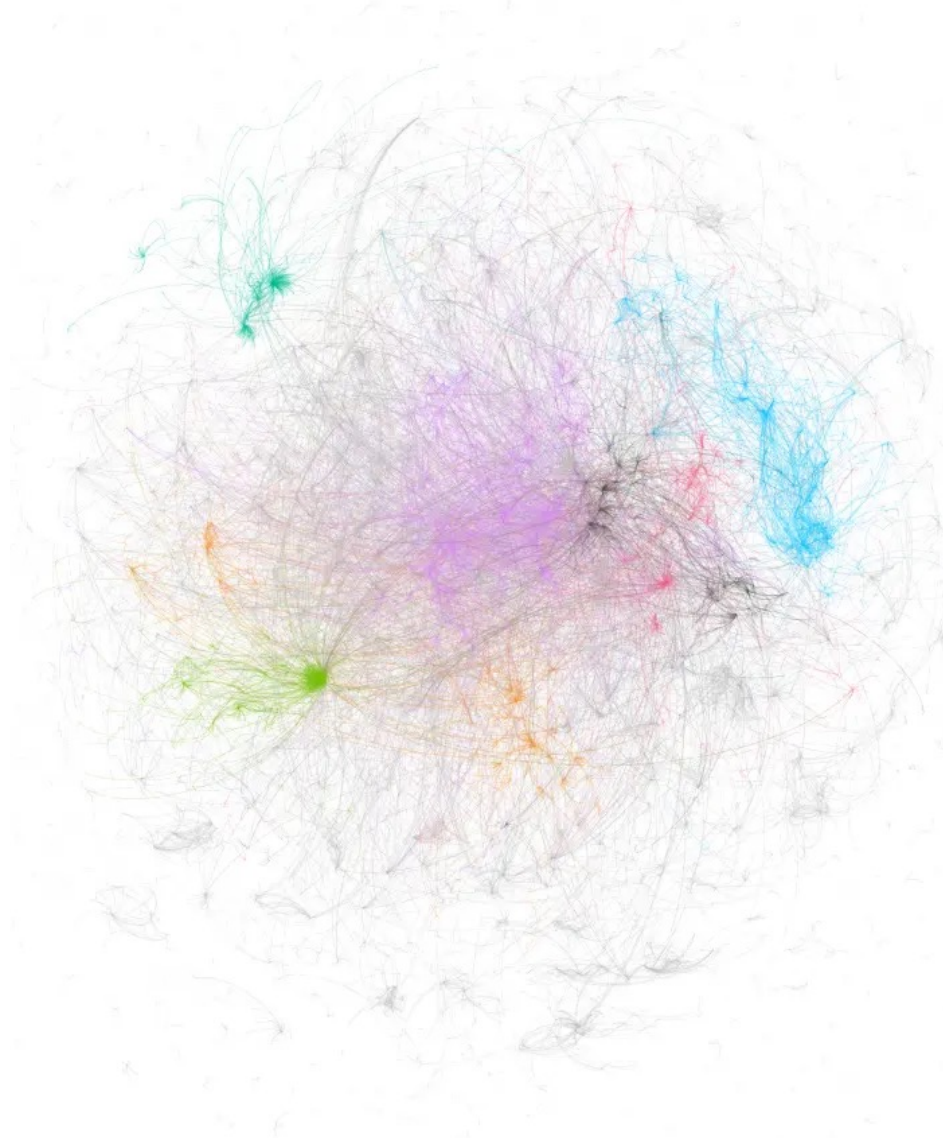
# Scientific data visualization

**Matplotlib + Adobe Illustrator**

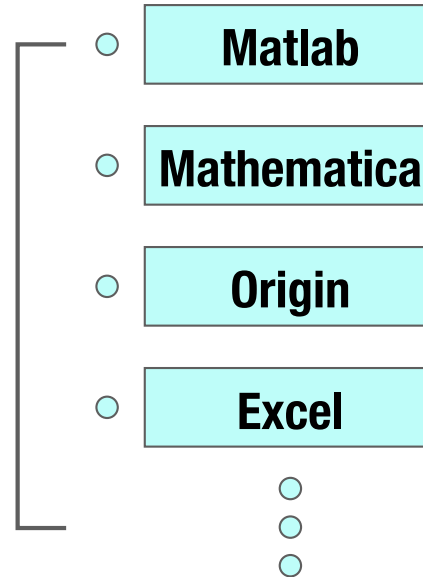
Ang Chen | Nov 2, 2023

# Agenda

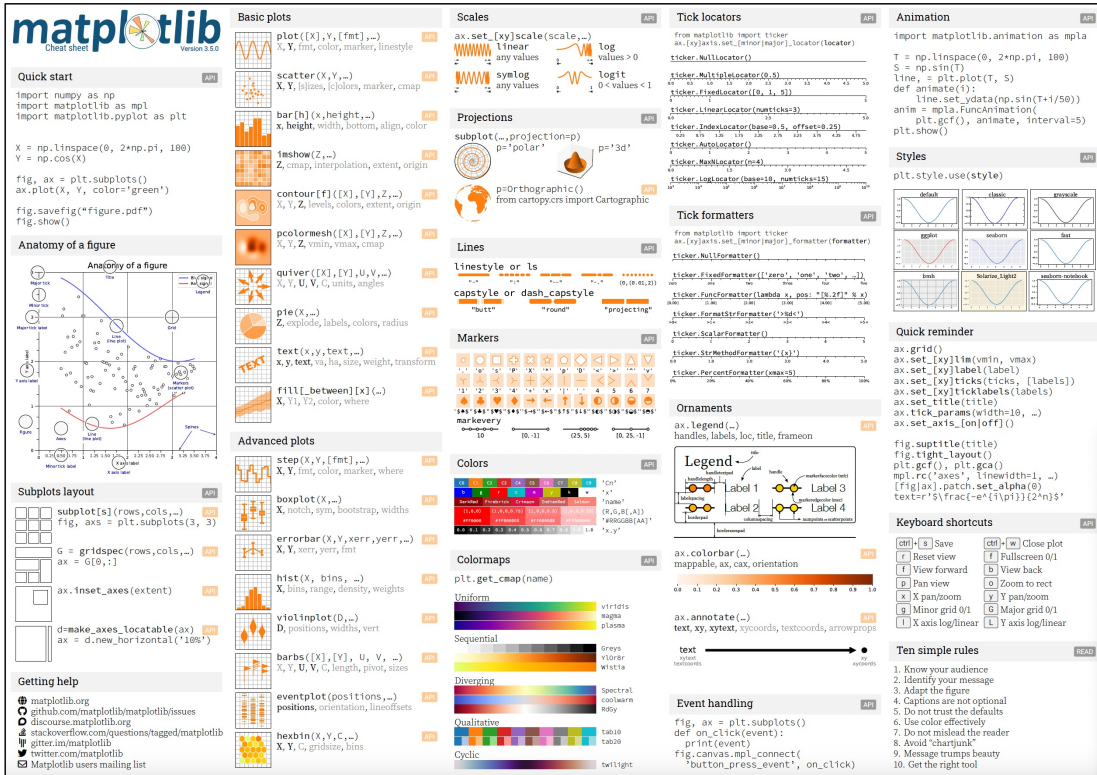
- Matplotlib  
Data plotting
- Adobe Illustrator  
Vector graphics editor  
& design program
- Fonts  
Font selection



# Matplotlib



# A third-party library of python



- Matplotlib website:  
<https://matplotlib.org>
- PDF matplotlib manual of 5 pages (left is 1/5)
- Beyond matplotlib

## Seaborn: Statistical data visualization

## Cartopy: Geospatial data processing

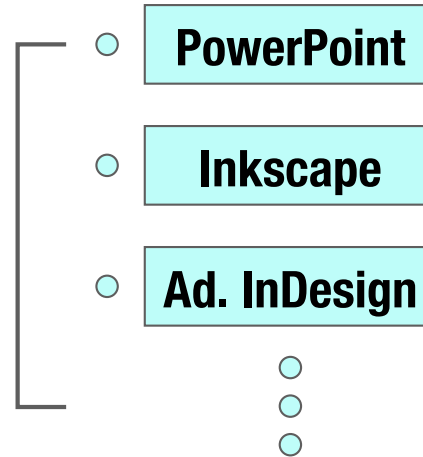
**yt:** Volumetric data visualization

## mpld3: Bringing Matplotlib to the browser

## Datashader: Large data processing pipeline

## plotnine: A grammar of graphics for Python

# Adobe Illustrator



# Using Adobe Illustrator

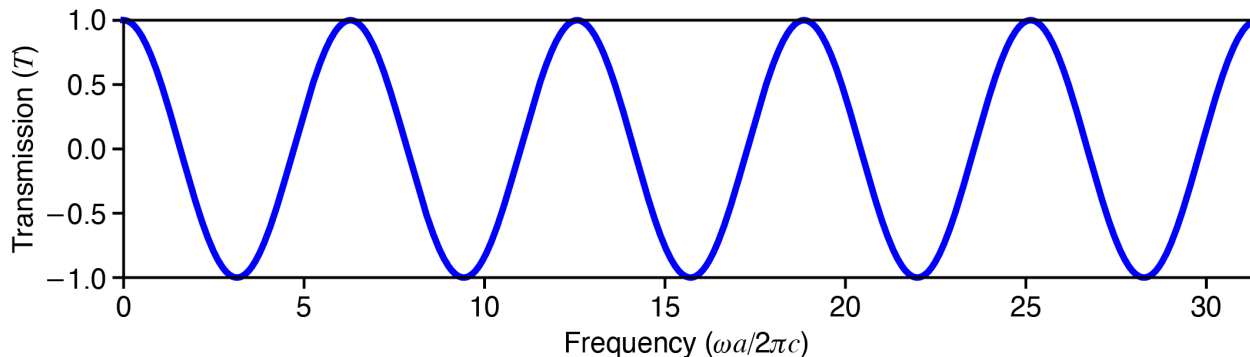
## Some good suggestions

- All wireframes, curves (including straight lines) and scatter points should be drawn as vectors.
- To reduce the size of the graph, complex two-dimensional and three-dimensional graphs should be drawn as bitmaps.
- In order to maintain the consistency of the size of all the graphical elements in the article, it is necessary to unify the canvas size of the graph.
- ...

# Fonts

# Which font?

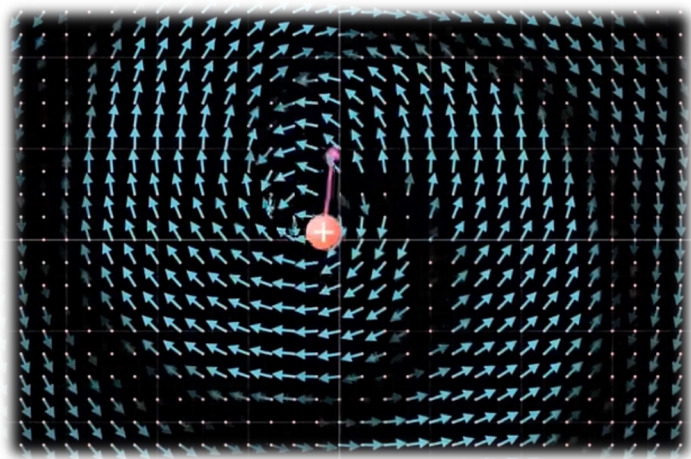
Different elements, different fonts



- Text and digit: Helvetica
- Physical quantity: Times Italic
- Greek letter: Symbol Proportional BT Regular



# One more thing



3Blue1Brown

A wonderful video:

[https://space.bilibili.com/88461692/?spm\\_id\\_from=333.999.0.0](https://space.bilibili.com/88461692/?spm_id_from=333.999.0.0)

Learn the python library: [manim](#)

<https://docs.manim.org.cn/index.html>

<https://github.com/3b1b>