Data Science Pipeline

Bringing your ideas to life through visuals

TIL6010 - Week 7

Panchamy Krishnakumari, 11 October 2021

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Value of visualisation

- **Exploratory visualization**
  - Develop and assess hypotheses
  - Find patterns / Discover errors in data
  - Identify trends and clusters, spotting local patterns, evaluating modeling output

- **Explanatory Visualization**
  - Share and Present Results
  - Stimulate Research, Collaborations and Ideas

Which visualisation to use?

- Story
- Audience
- Size of the data
- Data types
- Functionality and relationship between data elements

Data visualisation catalog

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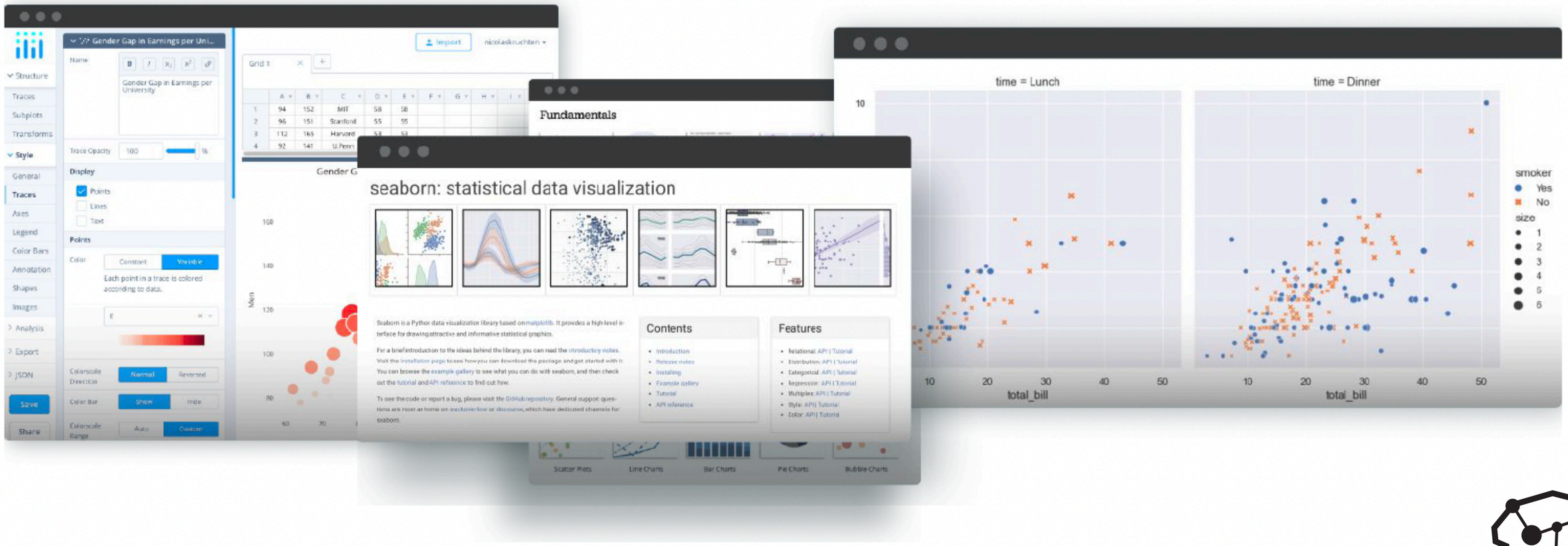
Which Python library to use?



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Python Libraries

- **Matplotlib**
  - It is the first library for Python data visualization. Most of the other libraries took Matplotlib as their base. Some libraries exist only to extend the functionality of Matplotlib and work together with less code.
  - Versatile
  - Easy to see the property of the information
  - Aesthetics need to be improved
  - Low-level and less user-friendly

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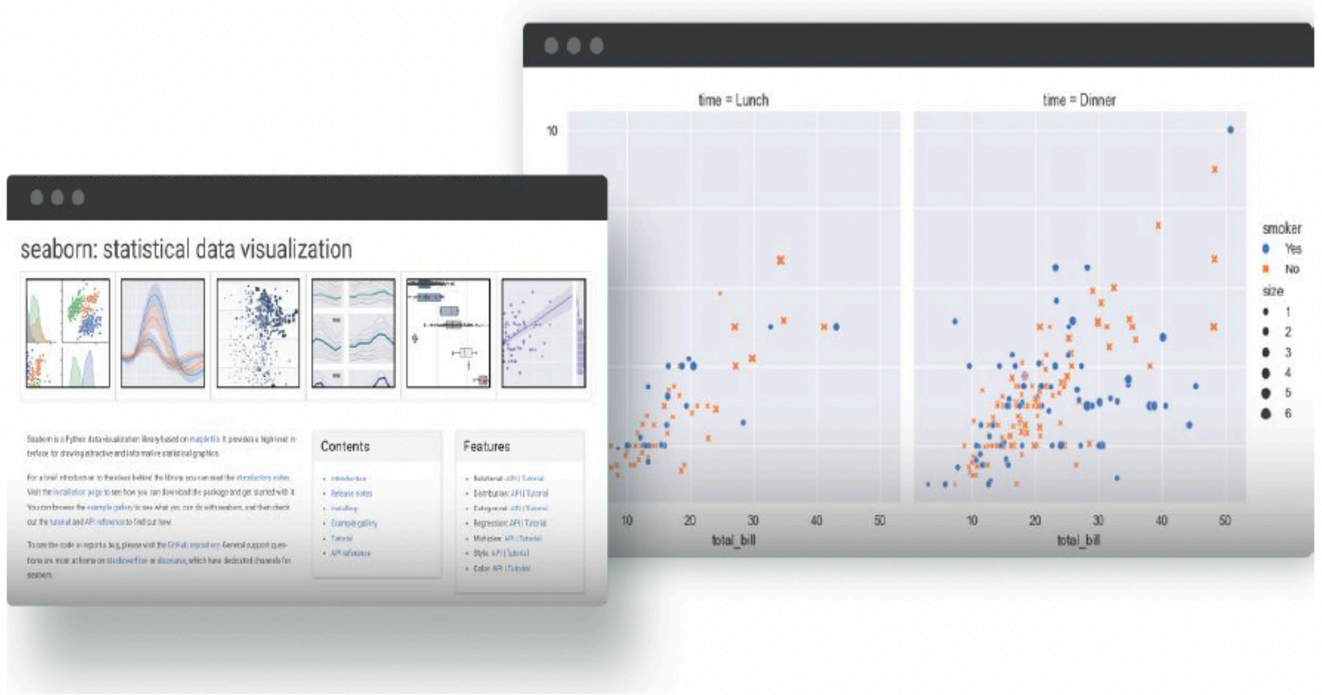
Python Libraries

- **Seaborn**
  - Seaborn is a library for visualizing data arrays based on a Matplotlib python plot package.
  - Very easy to create individual graphs and heat maps.
  - Beautifully presents processed data.
  - Less Code
  - Less Extensive Collection
  - Better aesthetics



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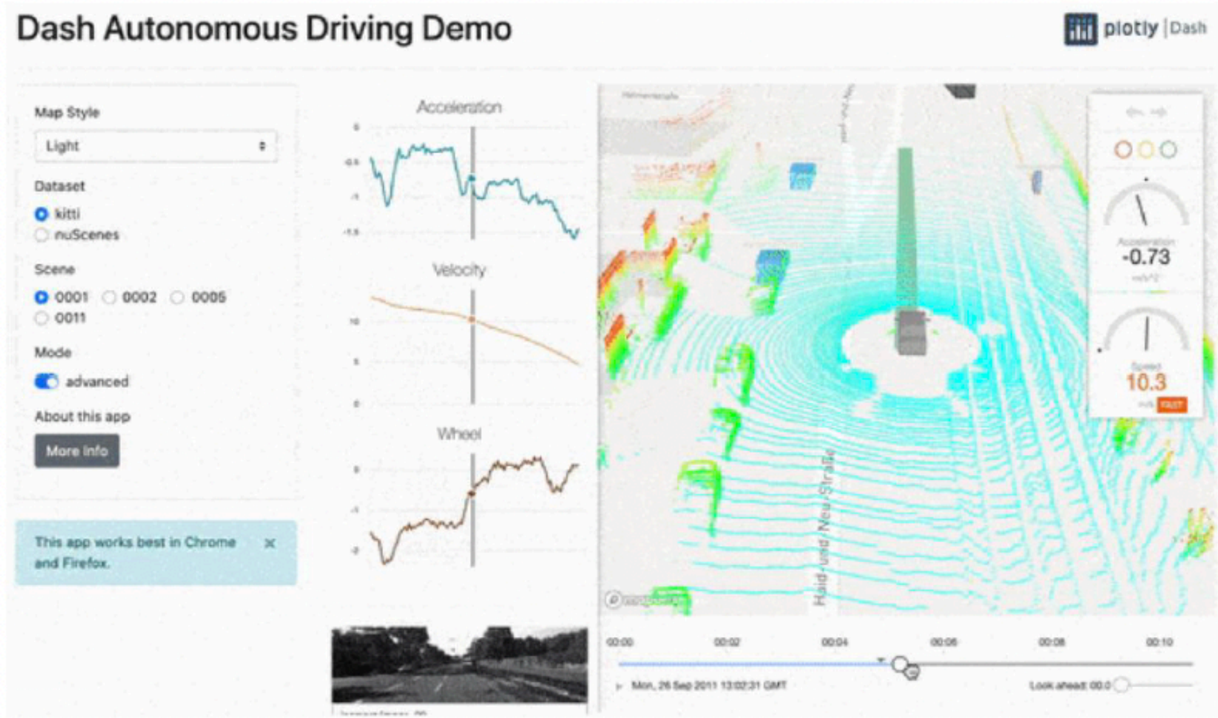
Python Libraries

- **Plotly**
  - Simple to create interactive plots
  - Easily create plots that are usually difficult to develop.
  - Plotly is the perfect tool for creating interactive plots with just a few lines of code.



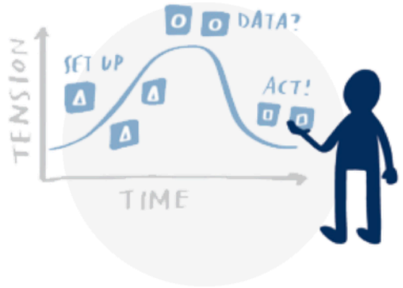
Ideas to story

understand the
context

choose an
effective visual

eliminate
clutter

focus
attention



tell a
story

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Data stories

- New York Times
- Nature/Lancet articles
- Wealth to scale
- Medium articles