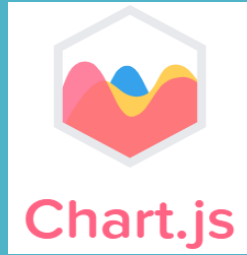# Having Fun with JavaScript
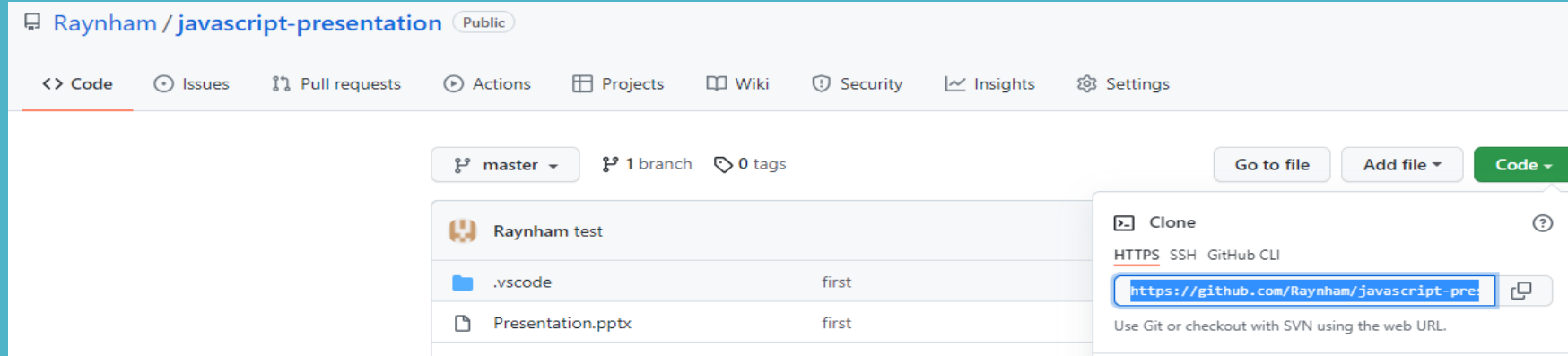
Introduction to Two JavaScript Visualization Libraries

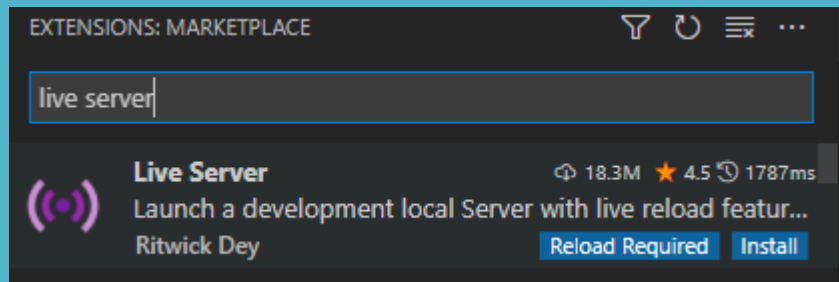# Before the Introduction…

(1)

git clone https://github.com/Raynham/javascript-presentation.git to get some examples

(2)

Install an extension named "live server" in VS Code, which can launch a local development server for static and dynamic pages. Some examples will appear errors if open as a local file (Maybe due to the strict same-origin policy of Chrome and Edge).

Three Ways to Install Echarts.js and D3.js

(1) Download echarts.min.js or d3.min.js and include them in html files.

```html
<script src = "/path/to/d3.min.js"></script>
```
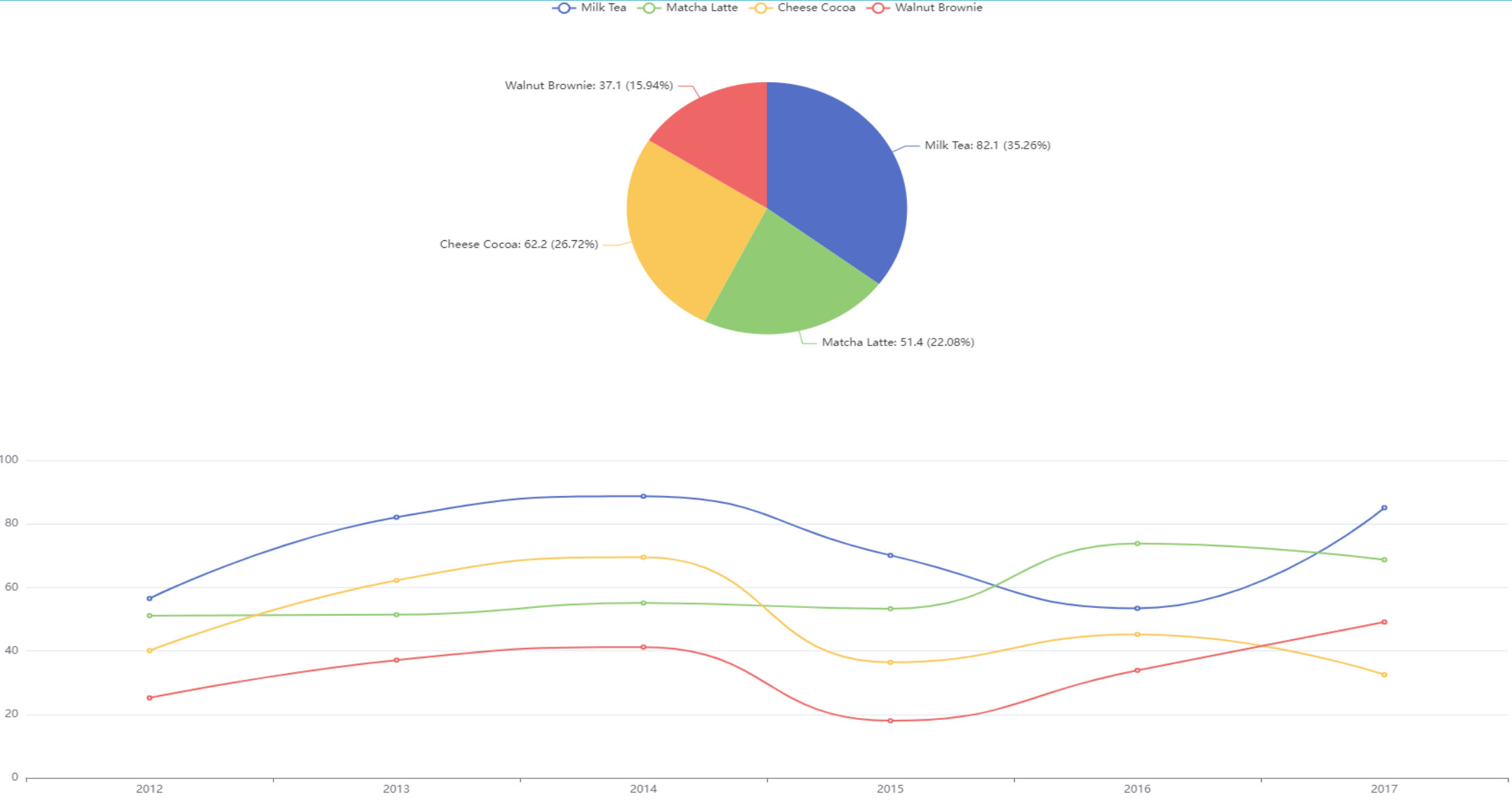
(2) Use CDN (Content Delivery Network)

```html
<script src="https://d3js.org/d3.v3.min.js"></script>
```

```html
<script src="https://cdn.jsdelivr.net/npm/echarts@5.3.0/dist/echarts.min.js"></script>
```

(3) npm install echarts --save / npm install d3 --save
     And then require() to use them

```javascript
let echarts = require('echarts');
```

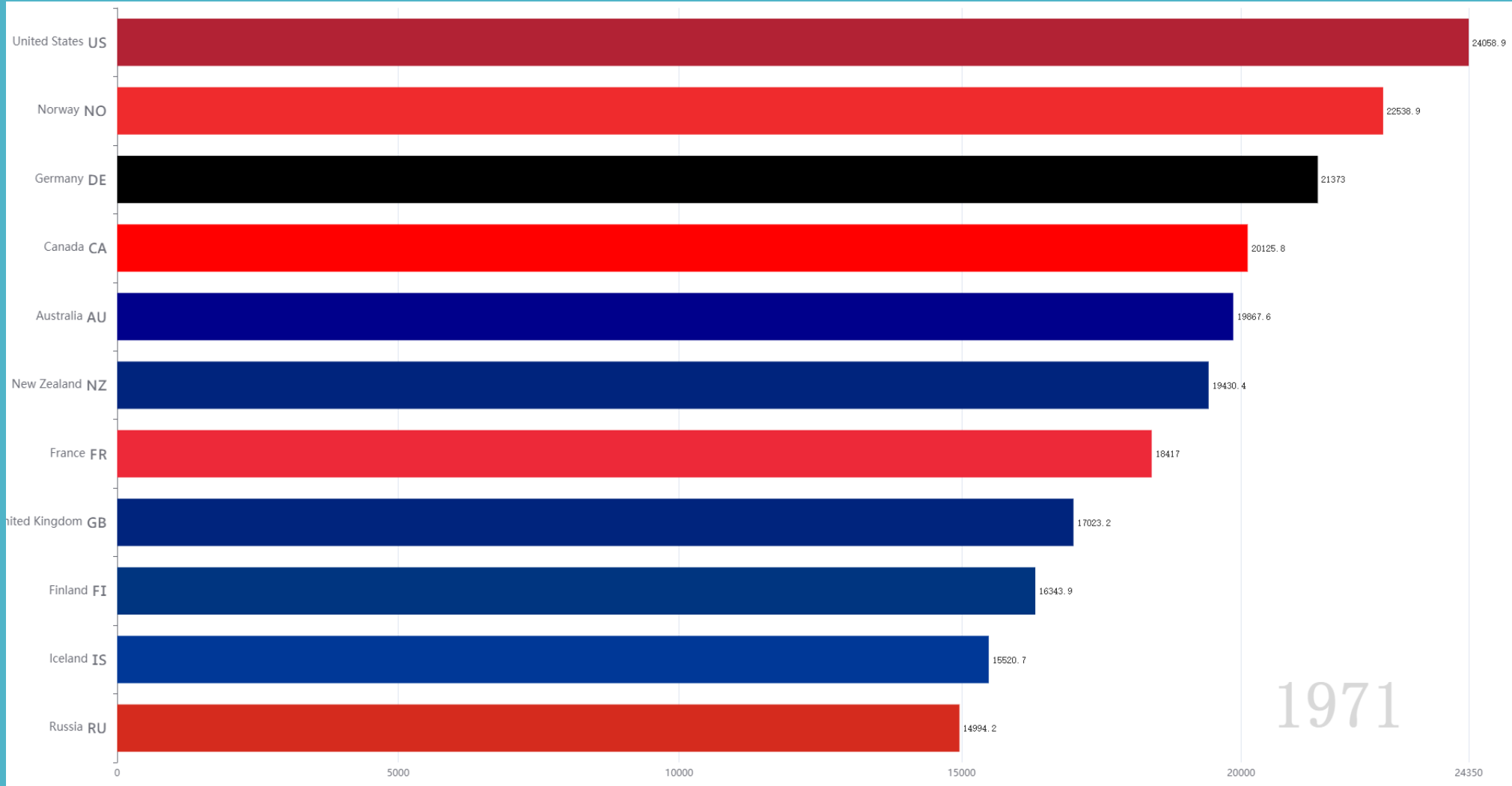# Dessert Sales by Echarts.js
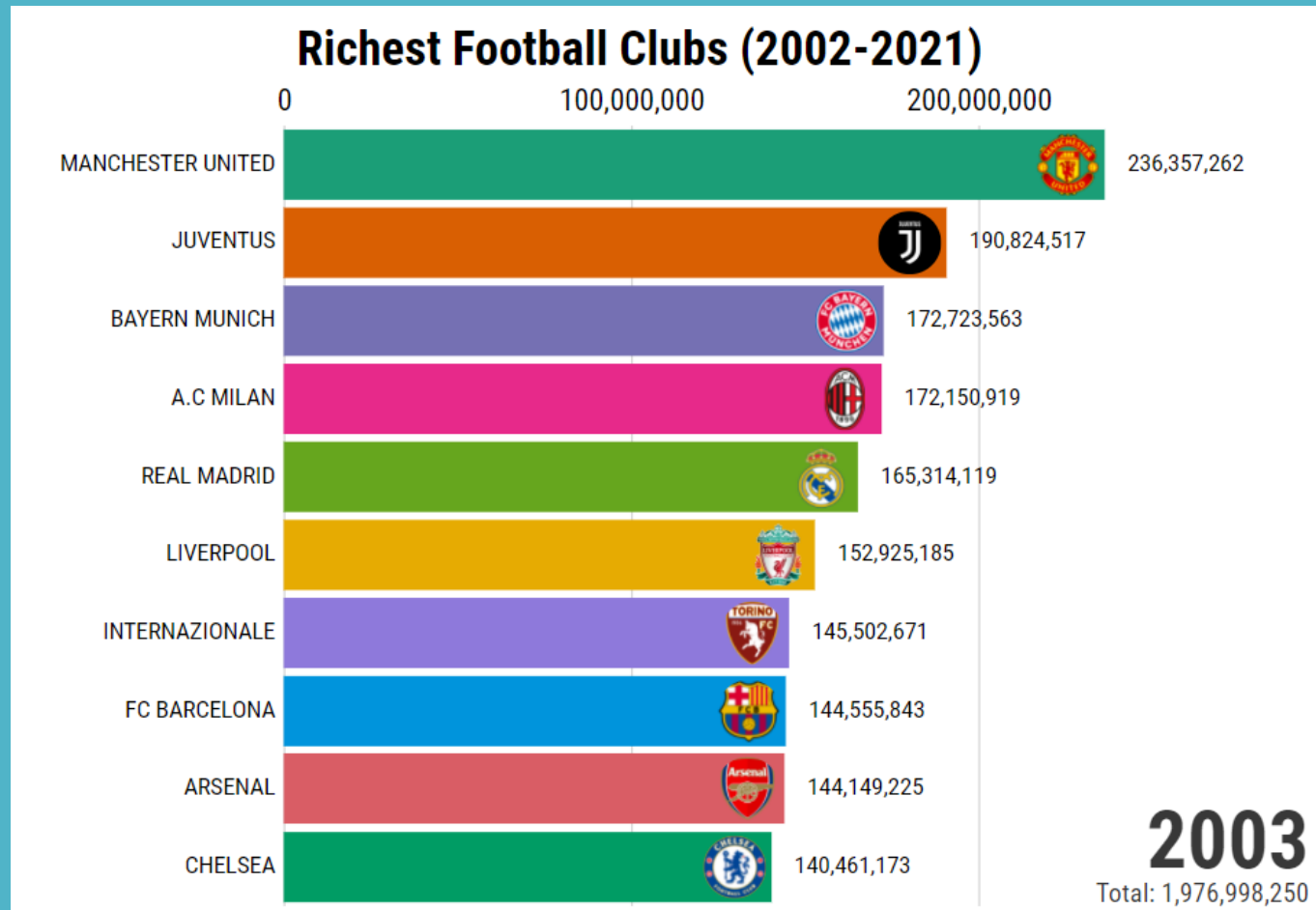
American film companies dashboard by D3.js

Compared with Tableau, what are the advantages of using JavaScript for data visualization?

(1) Dynamic Visualization

The Dynamic Change of The Average Income of Countries by Echart.js
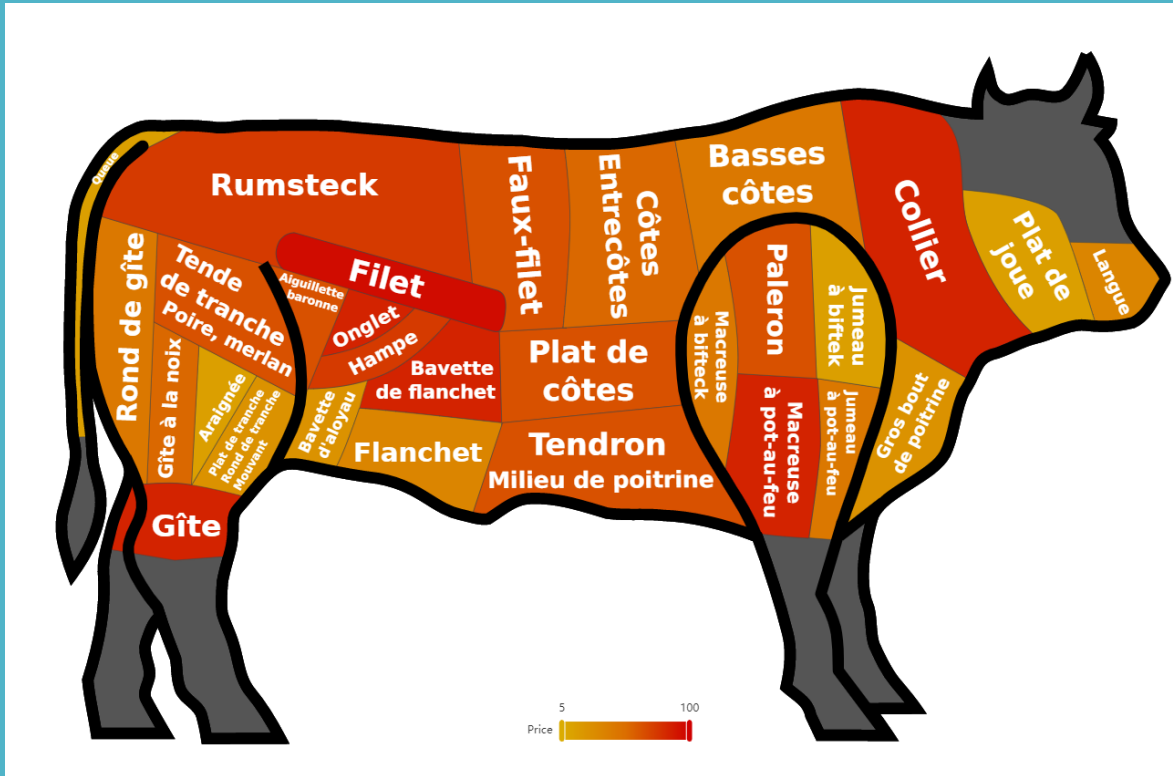
(2) Reuse (Componentization)

The Dynamic Change of Top 10 Richest Football Club in the World
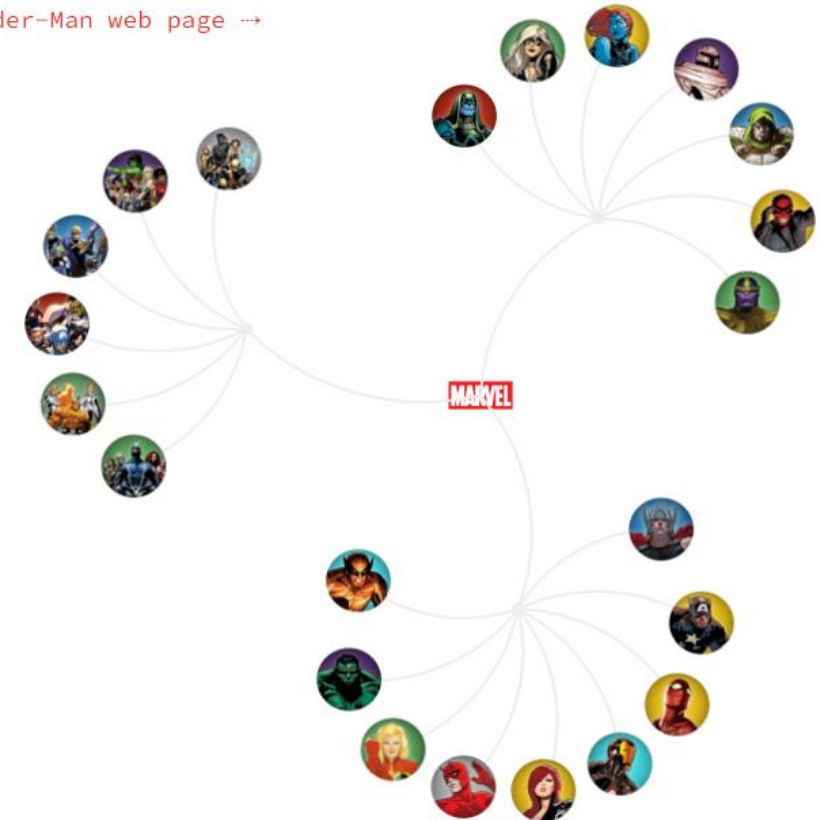https://app.flourish.studio/visualisation/8576423/

(3) Customization

The Geo Map about the Price of different beef parts

The Network of Marvel Universe Heroes

(4) Visualizing Real-Time Data
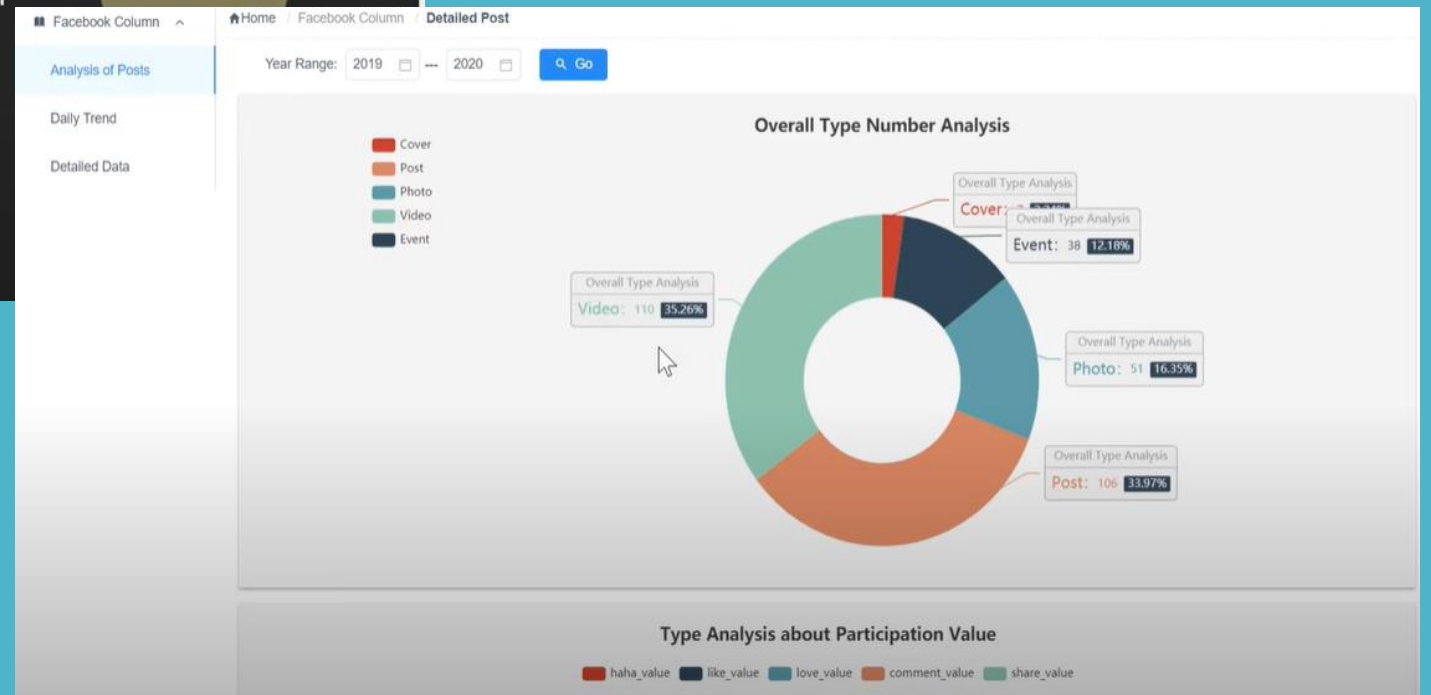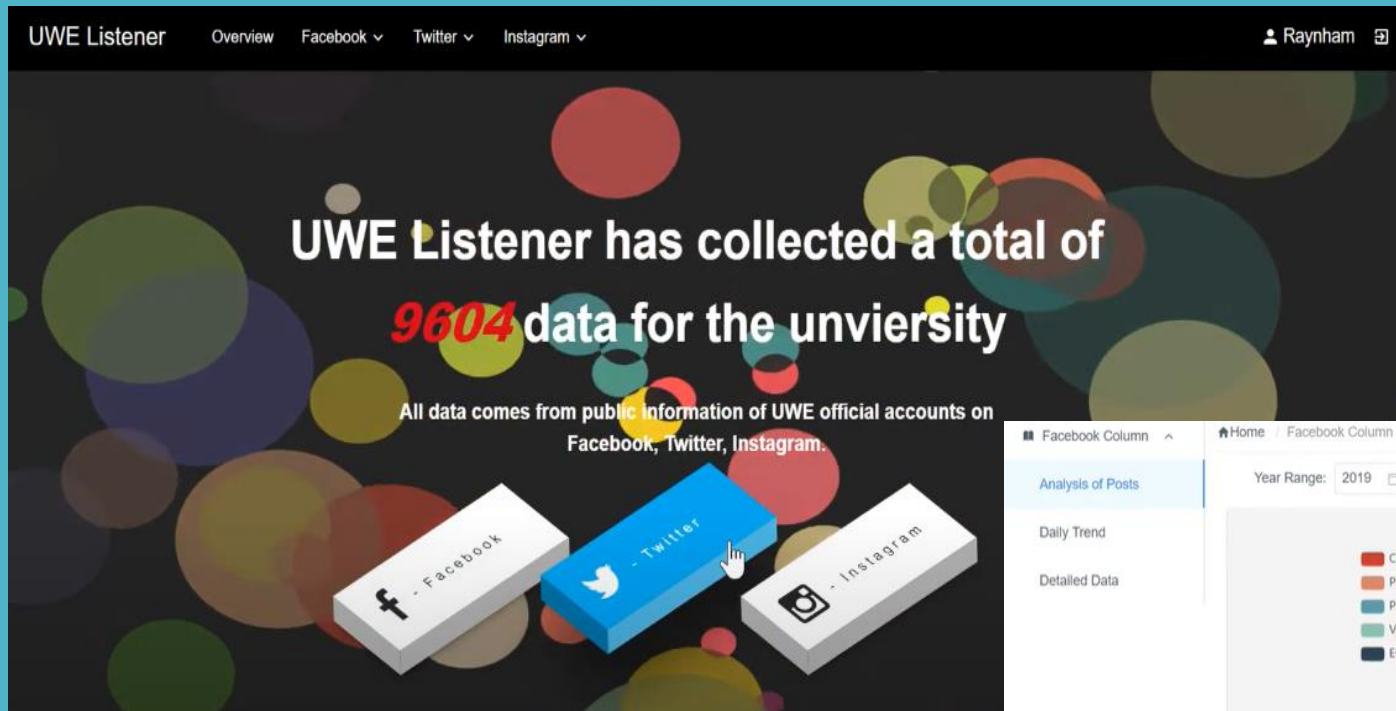
UWE Listener (A Monitoring System, My Undergraduate Graduation Project)

In the End…

JavaScript should be the closest programming language to users, so its visualization libraries focus more on interaction and animation so as to make a better user experience (UX). Meanwhile, it may be an alternative visualization solution for Data Science Mini-Project except for Tableau.

D3.js and Echarts.js have detailed documentation on the official website if you have an interest in them.
https://d3js.org/
https://echarts.apache.org/en/index.html