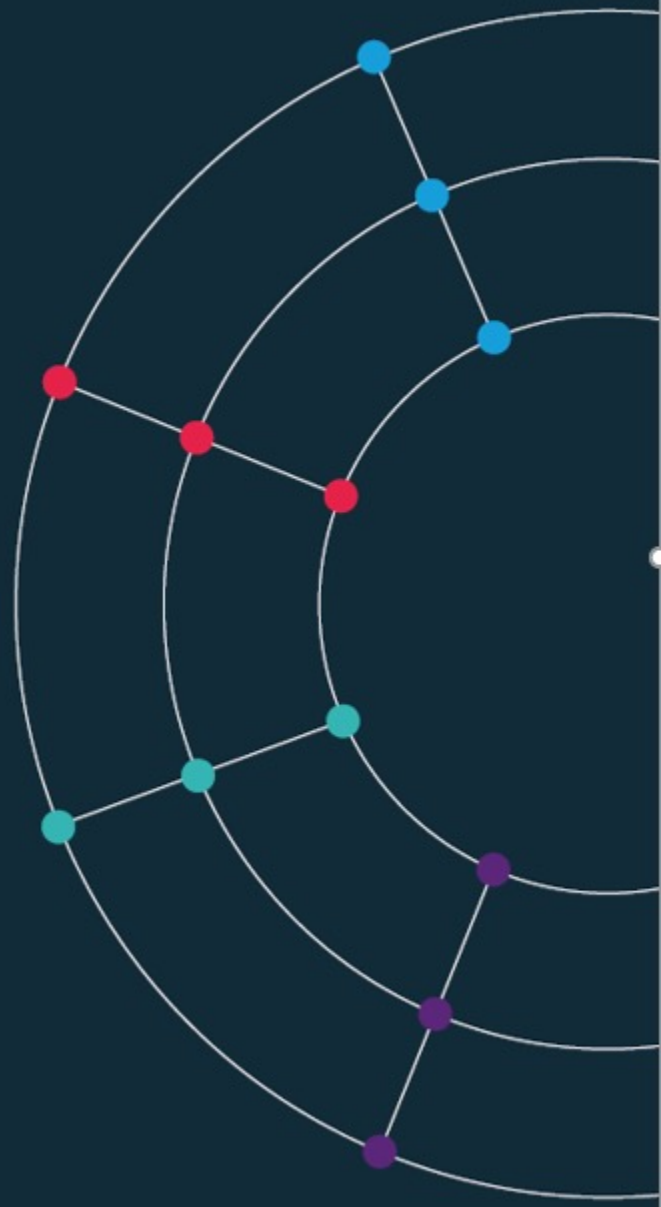
Session 2.

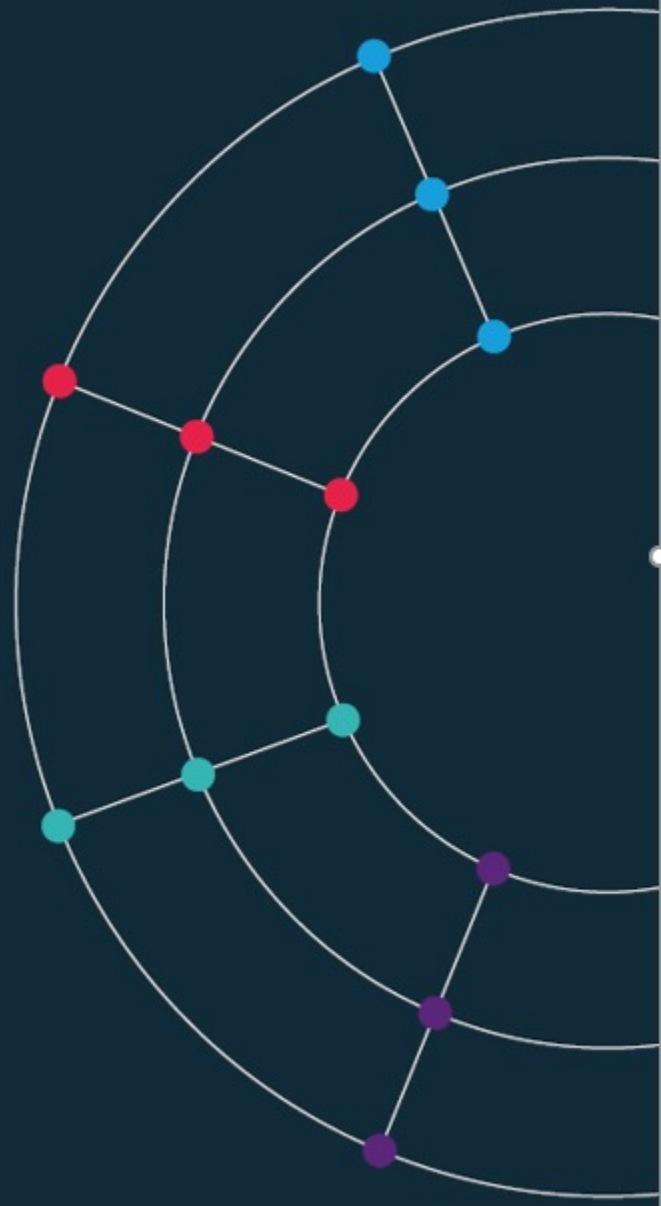
Building your first website



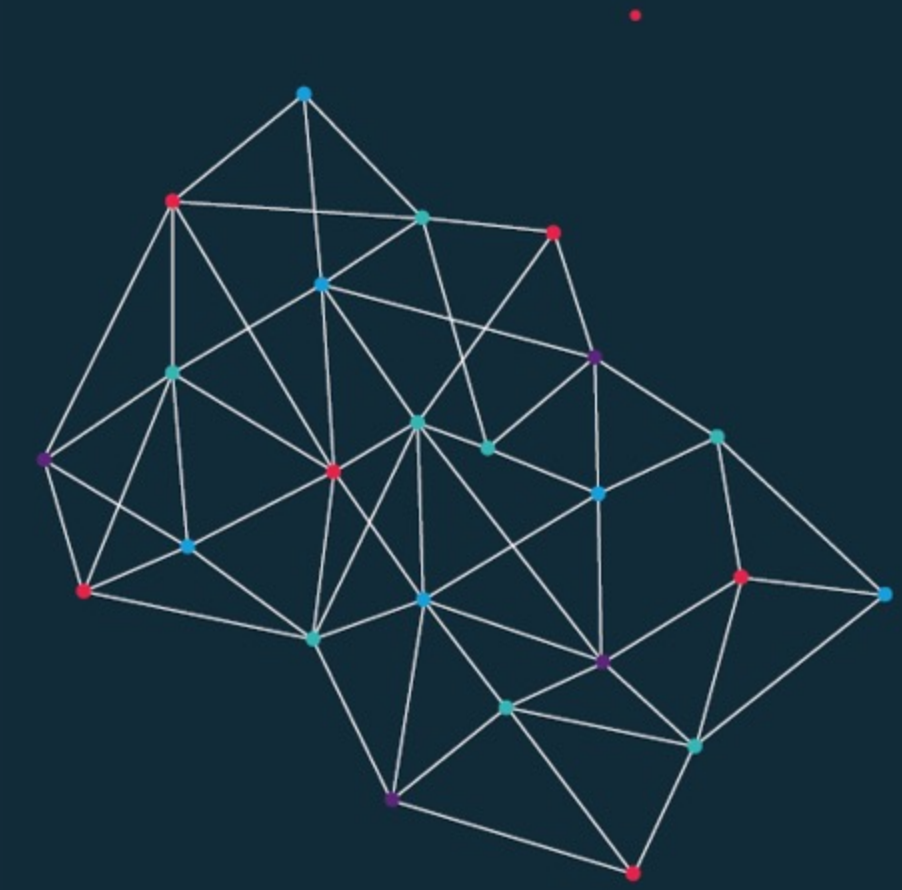
Session 2.

Building your first website

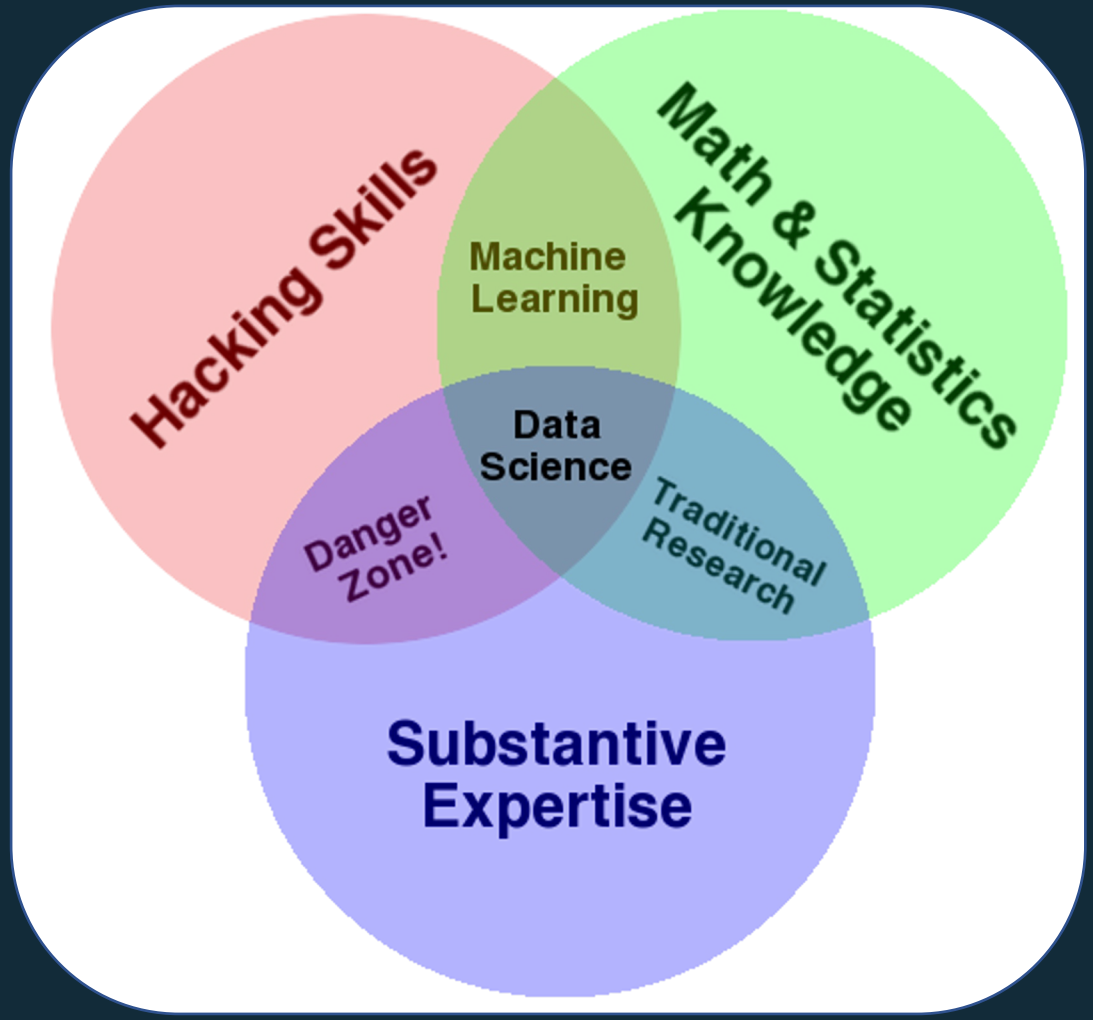
Introduction + building blocks



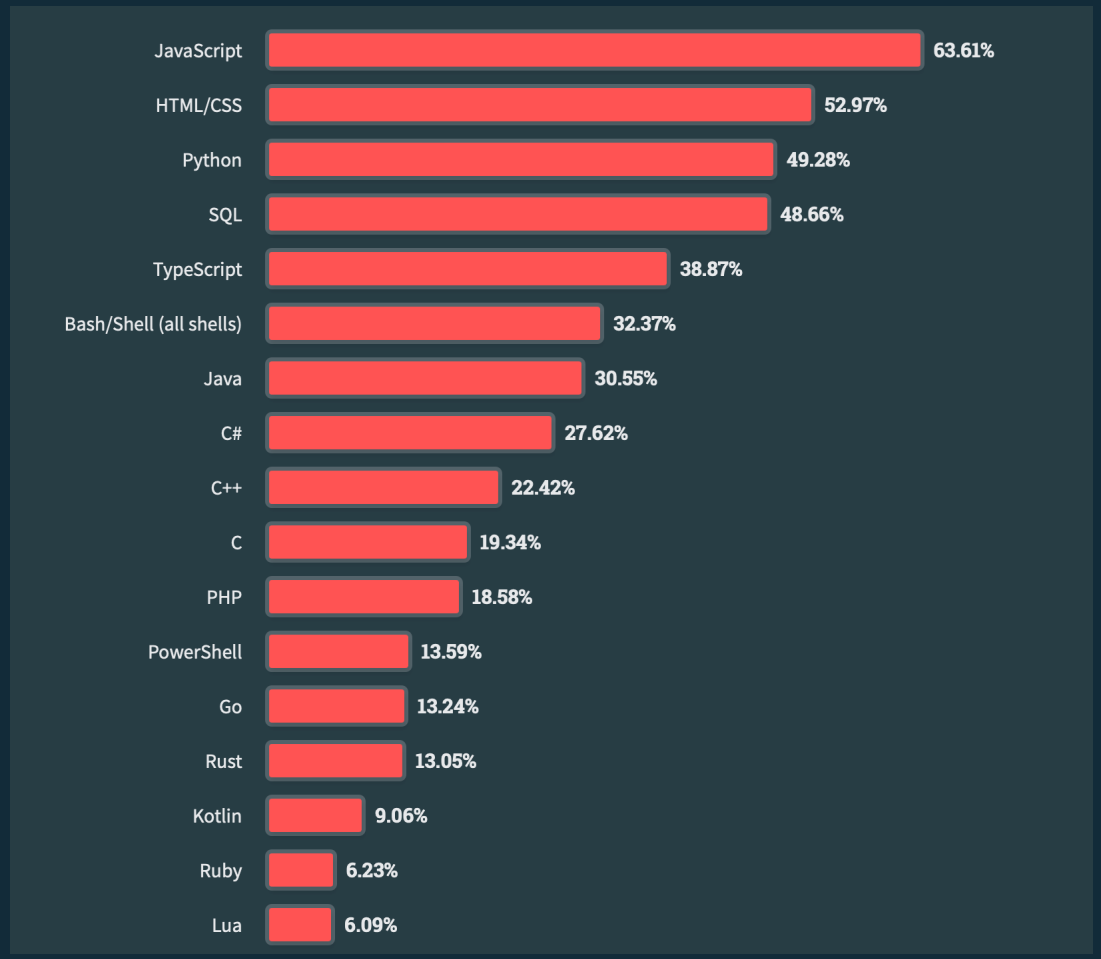
Building blocks.



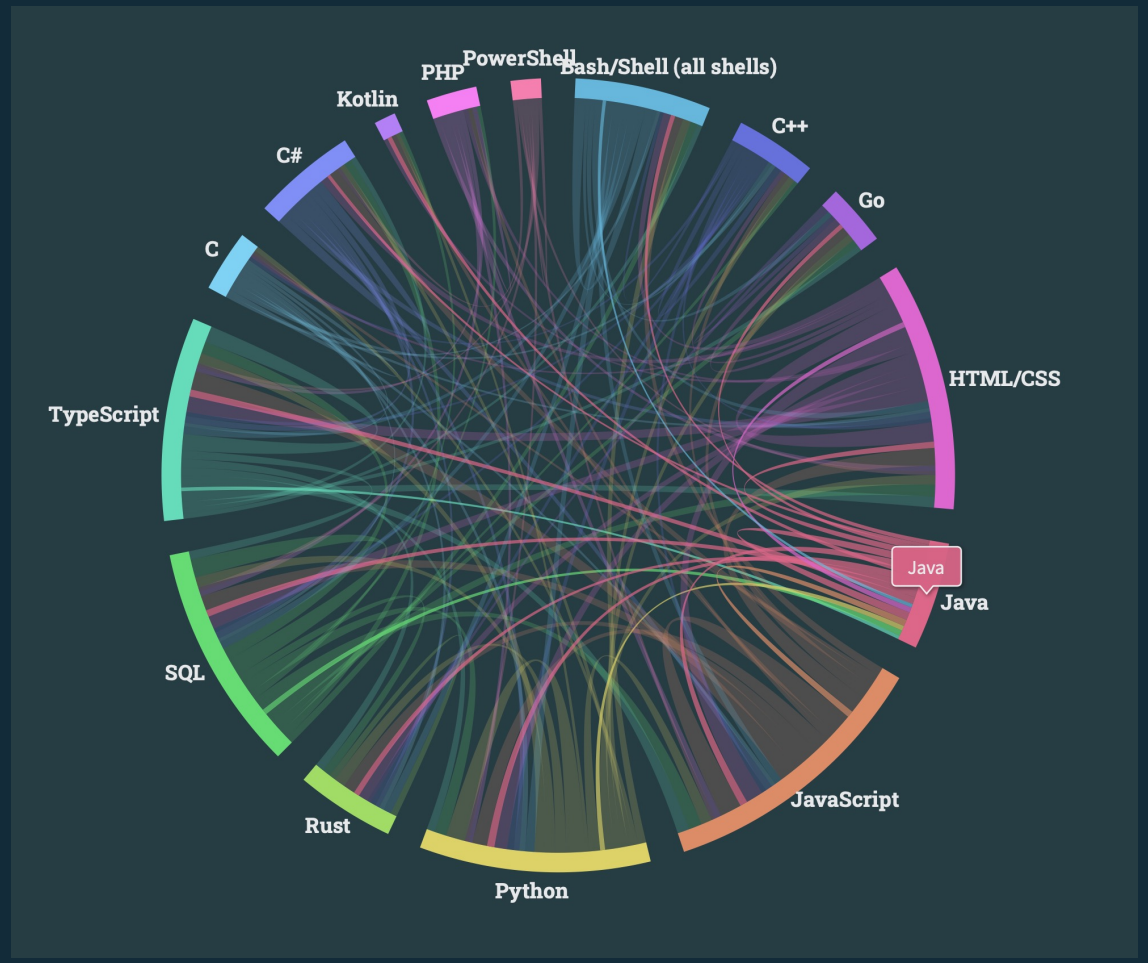
Data science.



Most used languages, 2023.



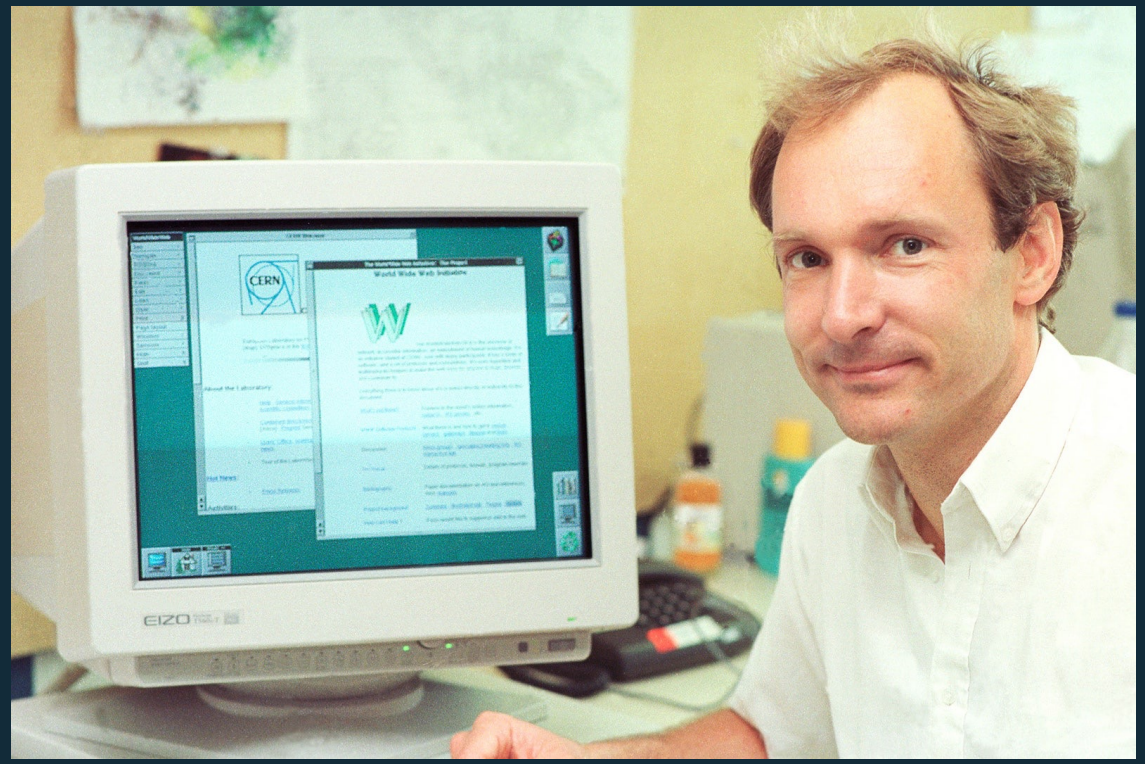
https://survey.stackoverflow.co/2023/#technology



https://survey.stackoverflow.co/2023/#technology-worked-with-vs-want-to-work-with

HTML.

- HT. Hypertext.
  - As in http:// (Hypertext Transfer Protocol)
- ML. Markup language
- 1993. Invented at CERN by Tim Berners-Lee.
- 1994. Dave Raggett (Hewlett Packard, Bristol), develops HTML+ and Arena browser.
- 1995. WC3 guidelines published, to end browser wars.
- Big idea. The HT in the name is the big idea. There were lots of markup languages (SGML for example) but TBN idea was to link documents together, it added hyperlinks.



Tim Berners-Lee. Image: CERN

https://home.cern/science/computing/birth-web/short-history-web

https://www.vanityfair.com/news/2018/07/the-man-who-created-the-world-wide-web-has-some-regrets

HTML example.

```
<!DOCTYPE html>
<html>

<!- Charlie Meyrick, Data Science -->
<!-- Economics Observatory, Data Science for Public Policy -->

<head>
    <title>Page Title</title>
</head>

<!-- The body contains things you see -->
<!-- Most elements both open and close, with the content in the middle -->
<!-- Indenting is optional, but helps with readability -->
<body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
</body>
</html>
```

CSS.

Cascading Style Sheets

- 1994. First proposal – again at CERN.

Håkon Wium Lie, 12 December 1995
https://www.w3.org/Style/CSS20/history.html

```
/* CSS files can can also be used to access e.g. fonts */
@import url('https://fonts.googleapis.com/css2?family=Catam

/* Format my paragraph */
p {
    font-size: 18px;
    margin: 5px 5px;
    line-height: 22.4px;
    color: #323232;
}

/* Format my heading */
h1 {
    font-family: "Catamaran";
    font-variant: small-caps;
    font-size: 60px;
    color: #320064;
    font-weight: 900;
    margin: 0px 0px 30px 0px;
}
```

Putting HTML and CSS together.

To link an HTML page to a CSS file you specify the location in the head section of your page.

```
<!-- Here is the head section -->
<head>
<title>Page Title</title>

<!-- Link to my CSS file -->
<link rel="stylesheet" href=”example1.css">
</head>
```

The page will now have the styles set out in the CSS file.

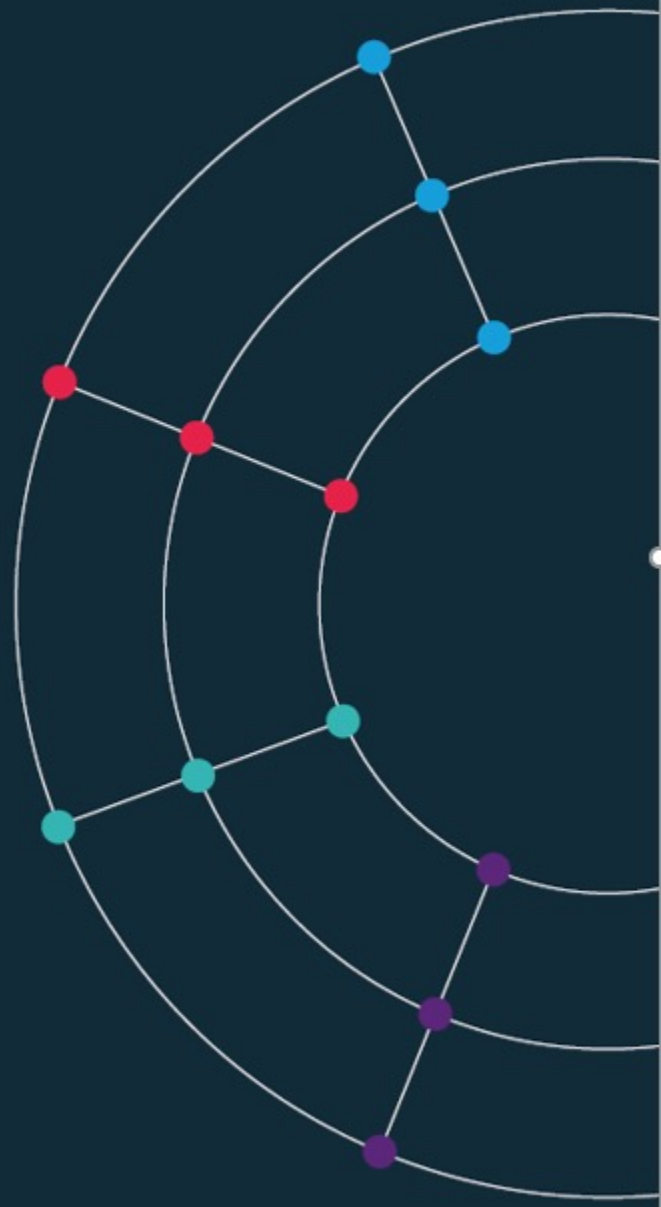
JavaScript.

- 1995. JS launched by Netscape. Brief war with Microsoft before widespread adoption.
- Brendan Eich. Key role in development of JS. Now used in almost all (>95%) of web sites.
- Interactivity. JS allows us to make web sites interactive. Changing what the web site looks like and does in response to our choices.
- In Data Science. Some uses of JS.
  - Fetching data. Grab data from another site, via an API, when you open you page.
  - Cleaning and manipulating data. Prepare and analyse the data for use in a chart or table.
  - Visualising data. Display the data in a way you wish. There are lots of charting “libraries” that do this. We will use two (Vega Lite and Charts.js).
  - Interactivity. Make visualisations interactive + sites fun and engaging.

Session 2.

Building your first website

Code-along



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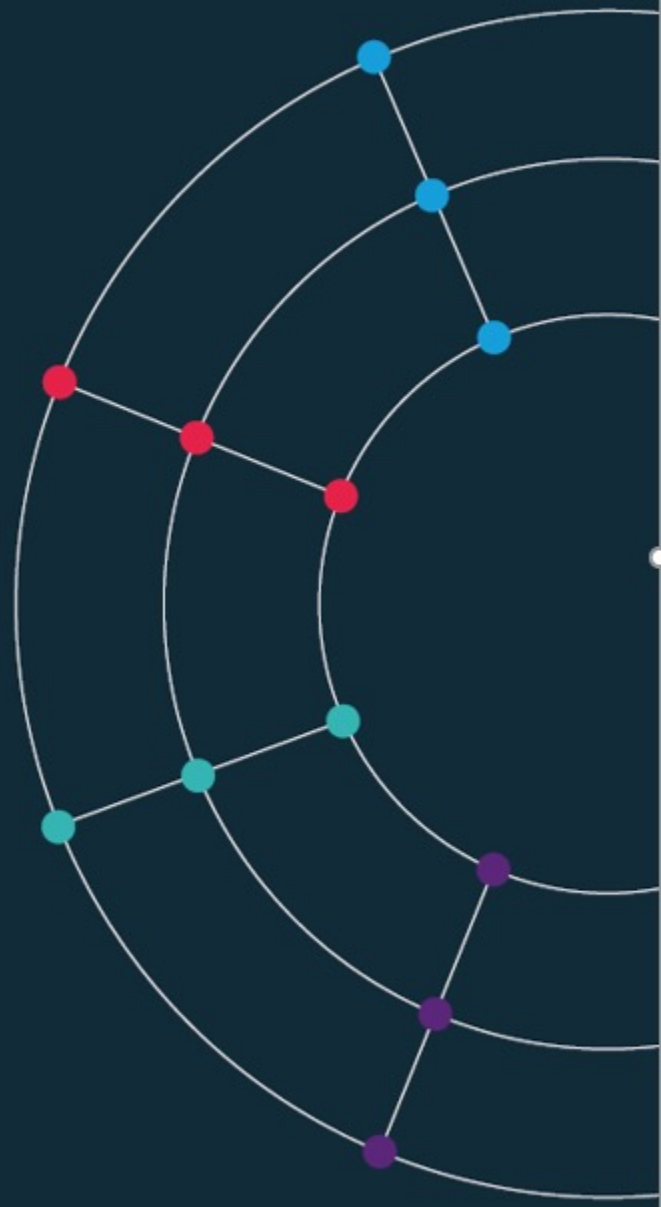
Building your first website

https://economicsobservatory.com/modern-data-visualisation



Code-along.

In this second practical session, we will be using VS Code and GitHub to build your personal website.

1. Edit your HTML (name, bio, etc)
2. Add some CSS (choose colours, fonts, etc)
3. Embed an example JSON chart

HTML.

- Create an edit your “index.html” file
- Use “s2_example1.html” for inspiration

CSS – three-tier format.

- Edit your CSS file
- Use “s2_example1.css”, “s2_example2.css” or “s2_example3.css” file to start:
  - Beginner: s2_example1.css
  - Intermediate: s2_example2.css
  - Advanced: s2_example3.css
- Link “s2_example1.css” (or others) to “index.html” using:

<link rel="stylesheet" href=”s2_example1.css"> (inside html head)

JSON.

- Edit your “index.html” file, and add JSON files to your file structure
- There are already two example charts embedded in the example HTML. Try replacing these with a chart from Section 1, or adding a new chart altogether