Introduction to HTML

What Is the Web?

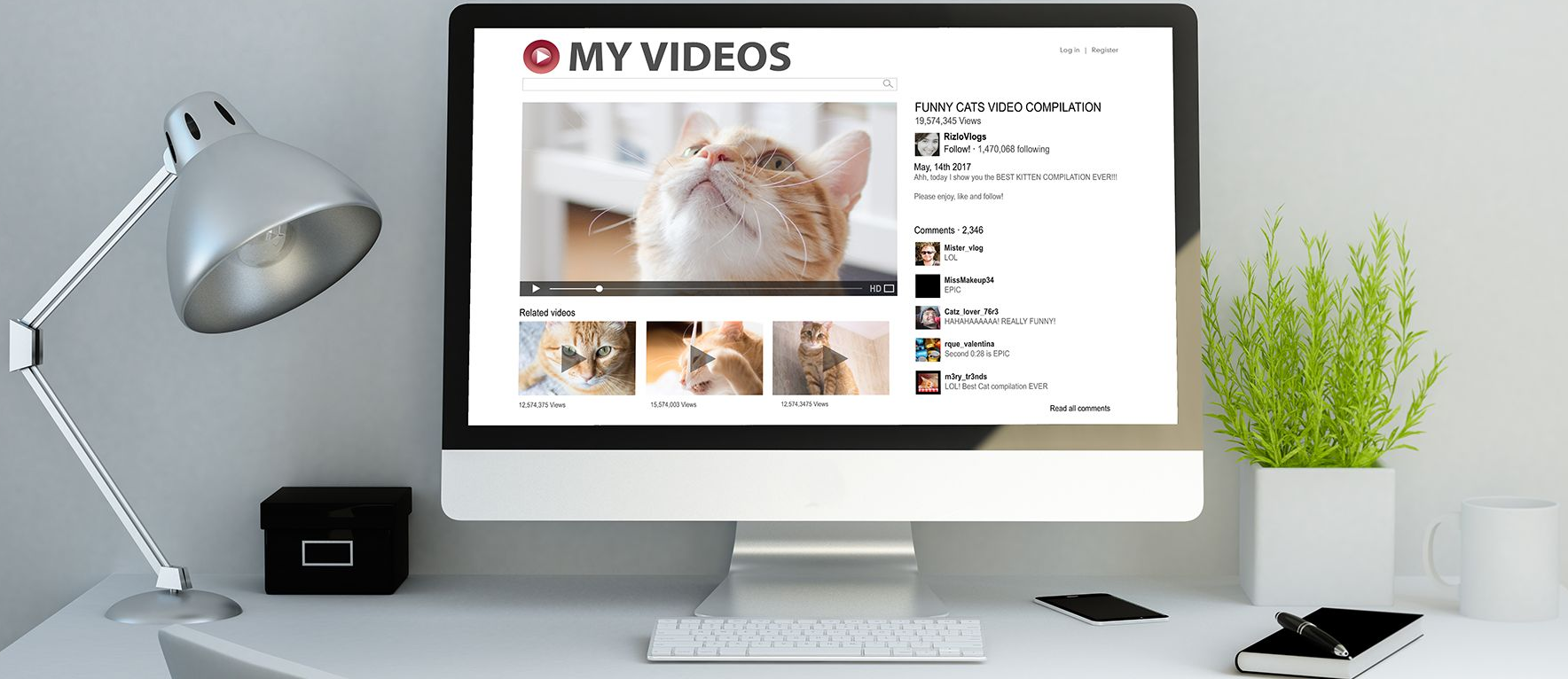The internet is a series of tubes and they're full of cats!
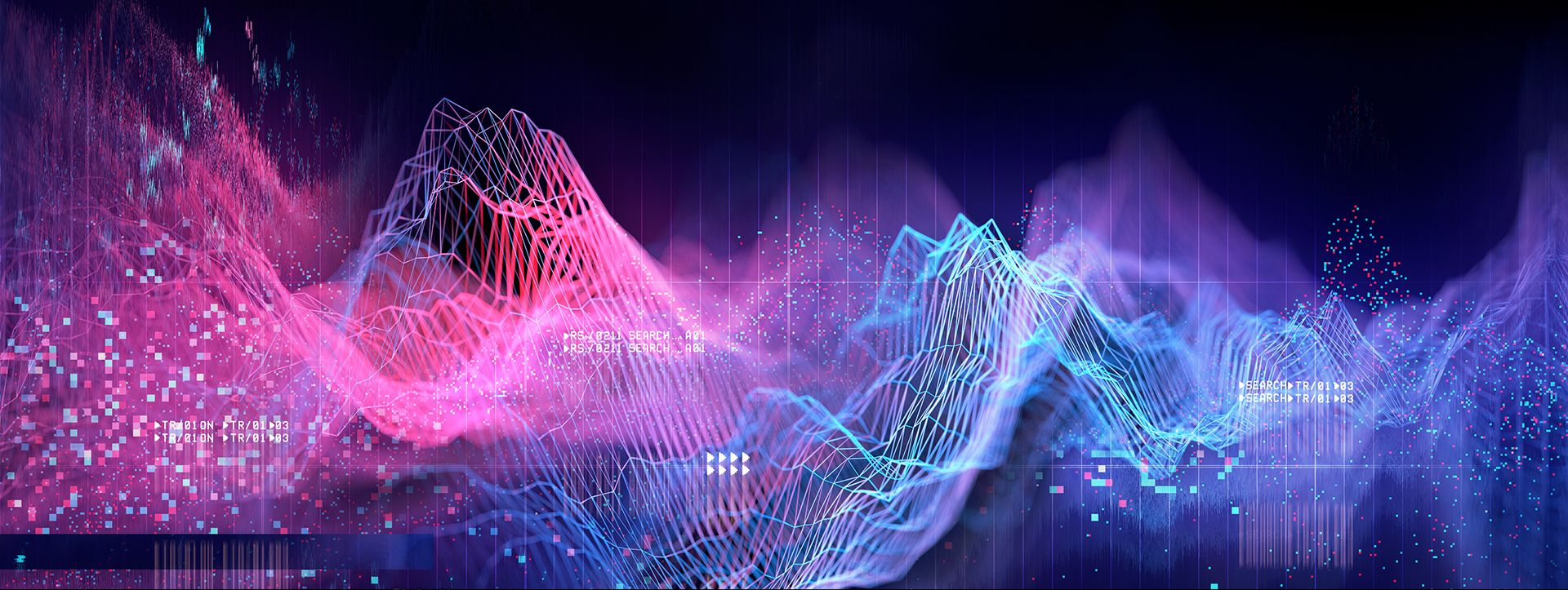
What Is the Web?

But how do these tubes get filled with cats?

What Is the Web?

Web developers build them into a special type of document: a webpage. These webpages are then accessible to other people on the internet.

Data analysts can use the web to **tell stories with data** and reach millions of people.

Group Activity: **The Web**

Turn to your neighbors and discuss the following:

1. What are some technologies used in front-end web development?

2. What can you tell us about each technology, i.e., what is its role in a website?

Suggested Time:
3 minutes

The Core Three Front-End Web Technologies

<title>Intro to HTML</title>

HTML5

- HTML is one of the three base languages behind every website.

- It defines all the basic content and a bit of formatting.

Periodic Table of HTML5 Elements

html															col	table
head	span									fieldset	form	body	h1	section	colgroup	tr
title	a									meter	select	aside	h2	header	caption	td
meta	rt	dfn	em	i	small	ins	hr	p	div	blockquote	legend	optgroup	address	h3	nav	menu	th
base	rp	abbr	time	b	strong	del	br	figcaption	ol	di	label	option	datalist	h4	article	command	tbody
link	noscript	q	var	sub	mark	kdb	wbr	figure	ul	dt	input	output	keygen	h5	footer	summary	thead
style	script	cite	samp	sup	ruby	bdo	code	pre	li	dd	textarea	button	progress	h6	hgroup	details	tfoot
		device	video	audio	track	canvas	iframe	source	param	object	embed	map	area	img

HTML

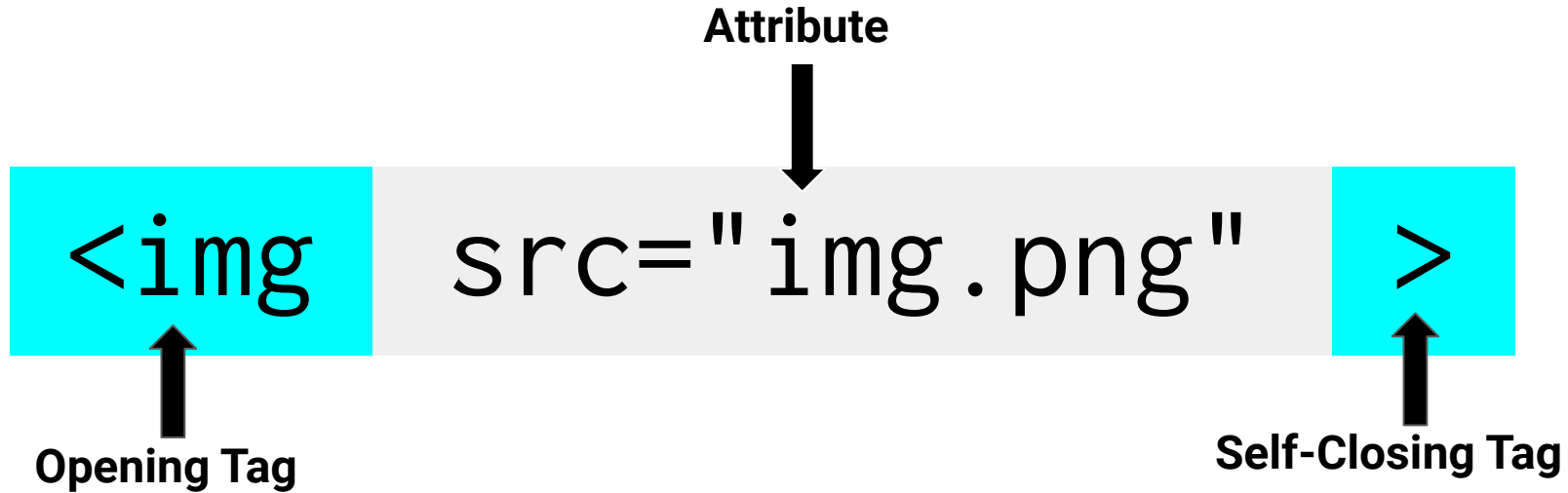HTML elements are rendered by the browser as visible parts of a webpage.

```
basic.html  ×
1   <!DOCTYPE html>
2   <html lang="en-us">
3
4   <head>
5     <meta charset="UTF-8">
6     <title>My First Page</title>
7   </head>
8
9   <body>
10    <h1>Hello World!</h1>
11    <h2>h1, you're too cheerful.</h2>
12  </body>
13
14  </html>
15
```

My First Page   ×

C ⌂ ⓘ file:///Users/nick/basic.html

Hello World!

h1, you're too cheerful.

HTML Syntax (Basic)

Content

<h1>   Welcome   </h1>

Opening Tag

Closing Tag

HTML Syntax (with Attribute)

Attribute

Content

`<a href="www.google.com>` `Link` `</a>`

Opening Tag

Closing Tag

Tricky Tags (Self-Closing)

Attribute

`<img src="img.png" >`

Opening Tag

Self-Closing Tag

CSS: Cascading Style Sheets (Appearance)

CSS describes how and where elements should appear on the page.
It defines things such as color, placement, fonts, sizes, and more.

CSS: Cascading Style Sheets

Responsible for a webpage's presentation.

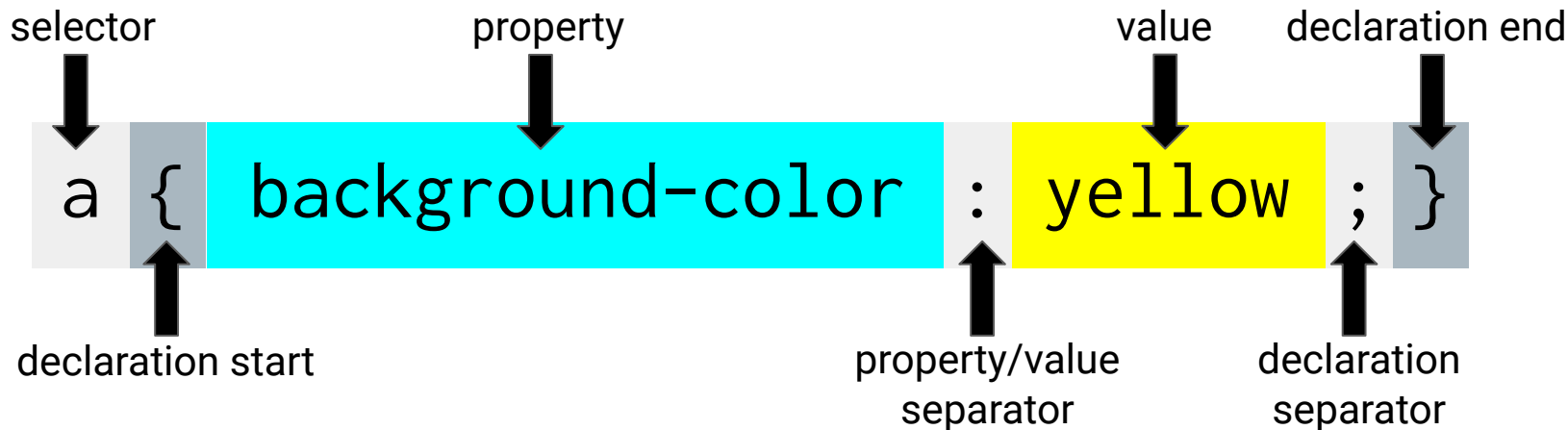Describes how each HTML element should appear on the screen.

Makes a webpage "look good."

Has rules that are made up of **selectors** and **declarations**.

CSS Syntax

CSS works by hooking onto selectors added into HTML using classes and identifiers. Once hooked, we apply styles to those HTML elements using CSS.

selector   property   value   declaration end

`a { background-color : yellow ; }`

declaration start   property/value separator   declaration separator

JavaScript

JavaScript is used to handle programming logic and give websites interactivity.

JavaScript

A scripting language created for the front-end web. It's responsible for a webpage's behavior.

Used to add, remove, or alter HTML elements and their CSS in a web page dynamically.

Handles events such as clicks, key presses, form submissions, and more.

Can be used to perform API requests from the browser.
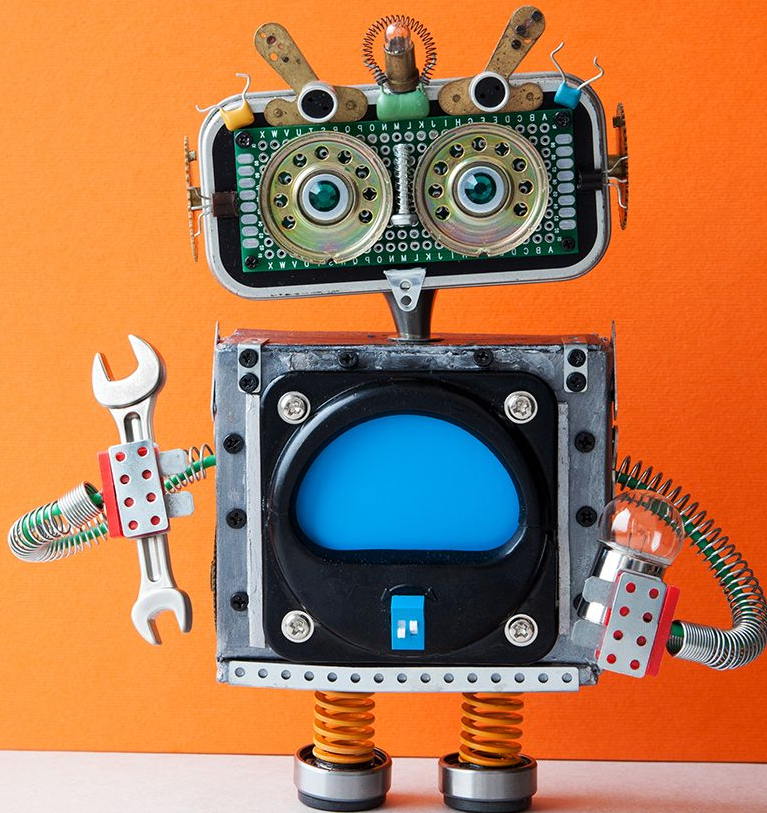
Select an option

This one is okay

Process data

Over the Next Few Weeks…

All the Technologies!

We will cover:

- HTML
- CSS
- Bootstrap CSS
- JavaScript
- JavaScript Charting Libraries
- And more!

Why Do We Need All This?

Visualizations (e.g., D3)

We'll be able to use HTML, CSS, and JavaScript to create some *very* impressive interactive visualizations with big data. [d3js.org](d3js.org)