



CSS for Geographers

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Slides | <http://bit.ly/2CF5kQw>

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The background features a dynamic, abstract design composed of numerous thin, colored lines in shades of yellow, pink, teal, and white. These lines are arranged in various patterns, some forming small rectangles or squares, while others are more scattered. The overall effect is a sense of motion and depth, resembling a stylized architectural or circuit board layout.

This talk is all fundamentals.

First Some Notes

Lots of supplemental info in these slides.

Designed to help you keep learning beyond this talk.

Pretty much everything is a link.

Slides <http://bit.ly/2CF5kQw>

CSS is Hard

- Closer to art than computer science
- Design AND development
- Lots of unintuitive concepts
- It has taken me **years** to amass this knowledge
 - Changes somewhat frequently
 - Best practices change

Lets do stuff with CSS!

- Customize Esri Apps
- Use Frameworks
- Build Web Pages
- Make Apps

Basics

Where does CSS go?

- Inside a `<style>` tag.

```
<style>/ * Put CSS here * </style>
```

- Inside a `.css` file that is loaded with a `<link>` tag.

```
<link href="my-css-file.css" rel="stylesheet" type="text/css"
```

- In the `<head>` tag of your `.html` files.

What does CSS look like?

```
html, body, #map {  
    margin: 0;  
  
    width: 100%;  
    height: 100%;  
}
```

Selector

```
html, body, #map
```

Declaration

```
html, body, #map {  
}  
}
```

Property

```
html, body, #map {  
    margin:  
}  
}
```

Value

```
html, body, #map {  
  margin: 0;  
}  
}
```

Property

```
html, body, #map {  
  margin: 0;  
  
  width:  
  
}
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Value

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}
```

A CSS Rule

```
html, body, #map {  
    margin: 0;  
  
    width: 100%;  
    height: 100%;  
}
```

How does CSS work?

The "C" is for Cascading

An abstract graphic at the bottom of the slide features a dense arrangement of overlapping geometric shapes, primarily triangles and rectangles, in various shades of blue, green, and purple. The shapes are oriented at different angles, creating a sense of depth and movement against a dark teal background.

Cascading Style Sheets

Styles from different sources *cascade* and coalesce into the final styles for the HTML tags that match their selectors.

A Typical Cascade

- Browser default stylesheet
- User defined stylesheets
- Stylesheets you include with `<link>`
- `<style>` tags
- Inline `<style>` attributes `<div style="...">`
- CSS values with `!important`

CSS Specificity

When properties collide specificity determines which property wins.

1. Rules with !important
2. Inline styles <div style="...">
3. <style> and <link> tags
4. Selector specificity

Selector Specificity

1. #foo - <div id="foo">
2. .foo - <div class="foo">
3. tag - <div>

CSS Explain

In a specificity tie the last loaded rule wins.

In Practice

Right click on something you want to change click "Inspect Element"

Explore a Storymap

Lets Build an App!

Alternate Fuel Stations

What?

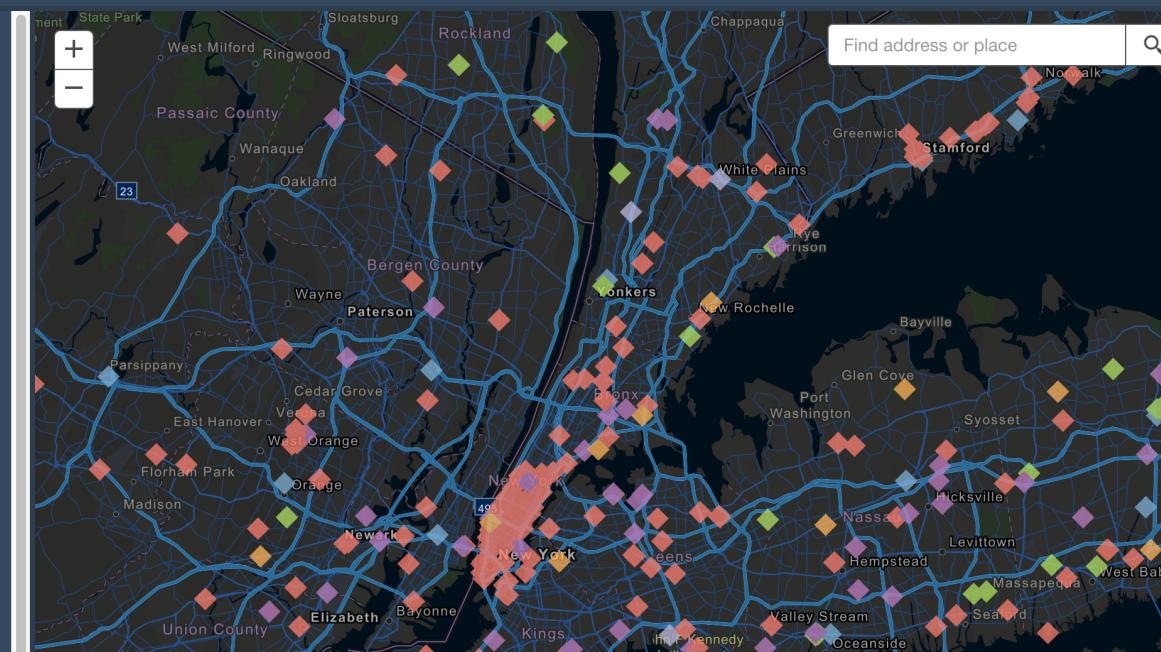
This dataset represents the locations of non-gasoline alternative fueling stations which provide biodiesel, CNG, electric, ethanol, hydrogen, LNG, and/or propane.

Why?

More than 250 million vehicles consume millions of barrels of petroleum every day in the United States. On-road passenger travel alone accounts for more than 2.5 trillion vehicle miles traveled each year. Vehicle fleet managers and drivers, corporate decision makers, and public transportation planners can use this data to develop strategies to conserve fuel.

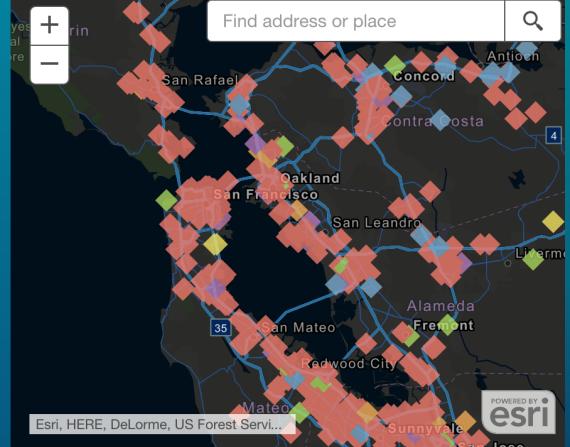
How?

Through a nationwide network of local coalitions, Clean Cities (<https://cleancities.energy.gov/>) provides project assistance to



Alternate Fuel Stations

What?



What?

This dataset represents the locations of non-gasoline alternative fueling stations which provide biodiesel, CNG,

Block vs Inline

- The Difference Between “Block” and “Inline”
- Block-level elements
- Inline elements
- Learn CSS Layout: the "display" property

Units

- Full unit reference
- The Lengths of CSS
- Unit and Values - QuirksMode

Floats

- All About Floats
- CSS Floats 101
- Learn CSS Layout: float

Bonus Demo: Problems with Floats

Bonus Demo #2: Clearing Floats

The Box Model

- The CSS Box Model
- Introduction to the CSS box model
- Learn CSS Layout: the box model

Box Sizing

- Learn CSS Layout: box-sizing
- * { Box-sizing: Border-box } FTW
- Box Sizing
- box-sizing

Flexbox

- Flexbox Froggy
- A Visual Guide to CSS3 Flexbox Properties
- Learn CSS Layout: flexbox
- Can I Use: flexbox
- A Complete Guide to Flexbox
- Using CSS flexible boxes

CSS Grid

- Grid Garden
- A Complete Guide to Grid
- Grid by Example
- Debugging Grid Layouts
- Intro to CSS Grid: Jen Simmons

Bonus Demo: CSS Grid Template Areas

Margin, Padding and Borders

- Mastering margin collapsing
- What You Should Know About Collapsing Margins
- Compare block elements to pictures hanging on a wall

Media Queries and Responsive Design

- Responsive design gallery
- Using media queries
- Media Queries for Standard Devices
- Learn CSS Layout: media queries

Positioning

- Learn CSS Layout: position
- position

Typography (Choosing Fonts)

- Google Fonts
- Google Web Fonts Typographic Project
- Font Pair
- Font tool roundup

Typography (Sizing Type)

- TypeScale
- A More Modern Scale for Web Typography

Adding Color

- Flat UI Colors
- Calcite Web Colors
- Color Pairing Matrix
- Adobe Kuler
- Color Lovers

Adding JavaScript

Bonus Demo: w/ CSS Grid

~120 lines of CSS, ~30 lines of JS.

Browser Compatibility

Sites like Can I Use? or MDN to check if browsers support a specific property. Sometimes experimental or partially supports CSS properties will require a –

webkit-, -moz- or -ms- prefix. Tools like Autoprefixer to add prefixes automatically.

@supports was introduced with CSS grid to check for support of new features.

More Browser Compatibility

Remember Microsoft only supports IE 11 officially now. All other versions are not supported and might have security bugs.

Best Practices

- Keep selectors as simple as possible
- Don't use tools until you are familiar with the basics
- Add tools when you feel limited or want more productivity
- Don't worry ~~so~~ much about browser compatibility
- Watch out for the size of web fonts
- Avoid floats for layout, try using Flexbox and Grid
- You can learn **A LOT** with inspector



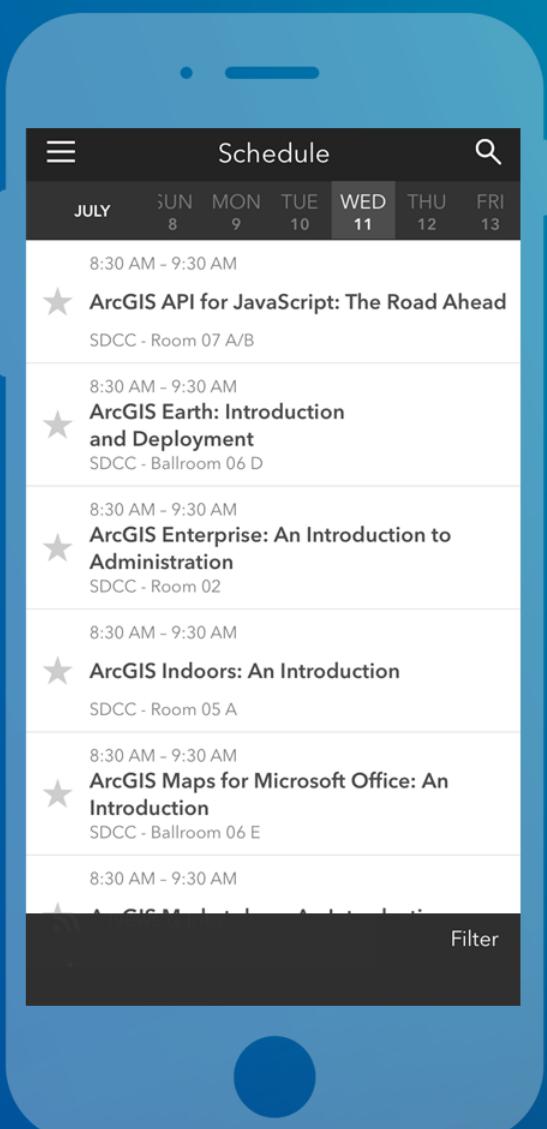
Slides at <http://bit.ly/2T4zaKJ>

Please Take Our Survey on the App

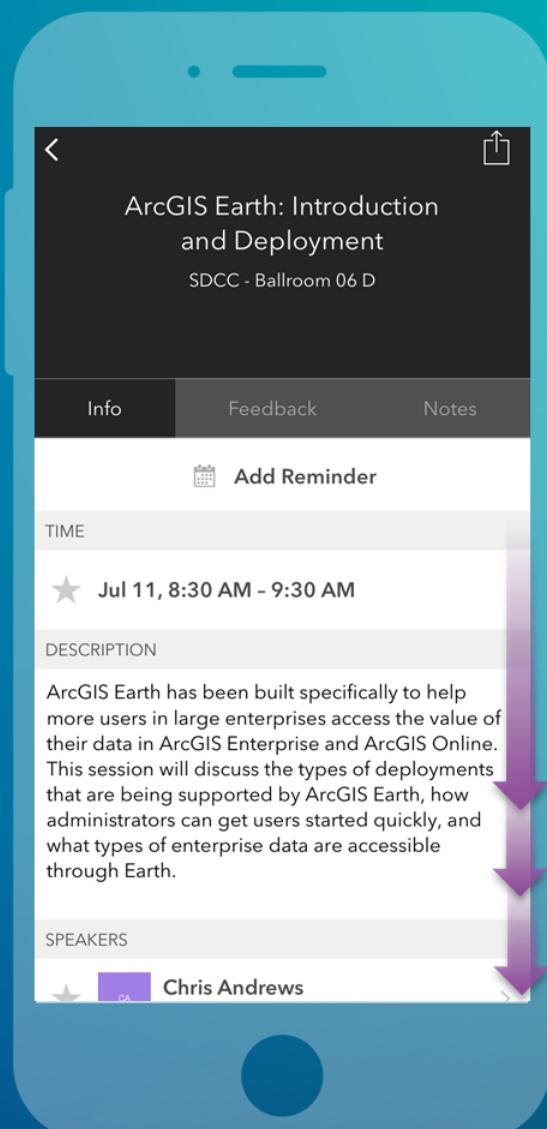
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