



MODERN SEO

SEARCH & SOCIAL OPTIMIZATION



Traditional SEO

Content Quality

Crawler Hints

Metadata

Thumbnails

Structured Data

Mobile Optimizations

Performance

PWA

Accelerated Mobile Pages



Traditional SEO

- ▶ Making it easy for crawlers to do their job
- ▶ Increasing the “quality” of your site
- ▶ **Unique and targeted** content, including relevant keywords and terminology
- ▶ Richness of content
- ▶ Frequent updates
- ▶ Link building
- ▶ Keyword stuffing (used to work)



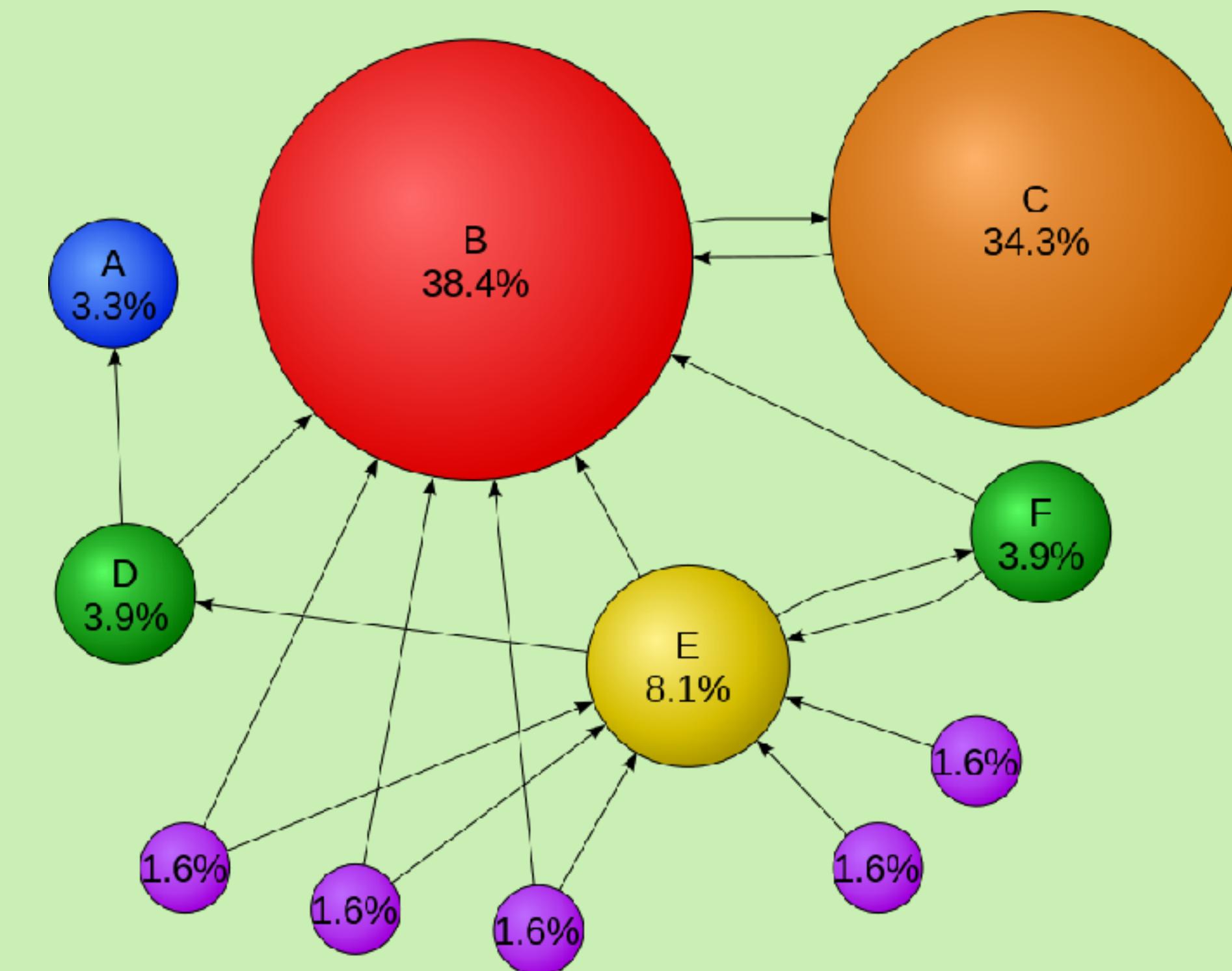
Traditional SEO

Businesses with a Physical Location

- ▶ Create a complete Google [My Business page](#)
- ▶ Ask for reviews for your business, and display on your website
- ▶ Submit your business to local directories - <https://moz.com/local>
- ▶ Correct errors/outdated information in [Local Citations](#)
- ▶ Acquire local backlinks - vendors, partners, local NGOs etc
- ▶ Set specific geographic-targeting in [Google Search Console](#)

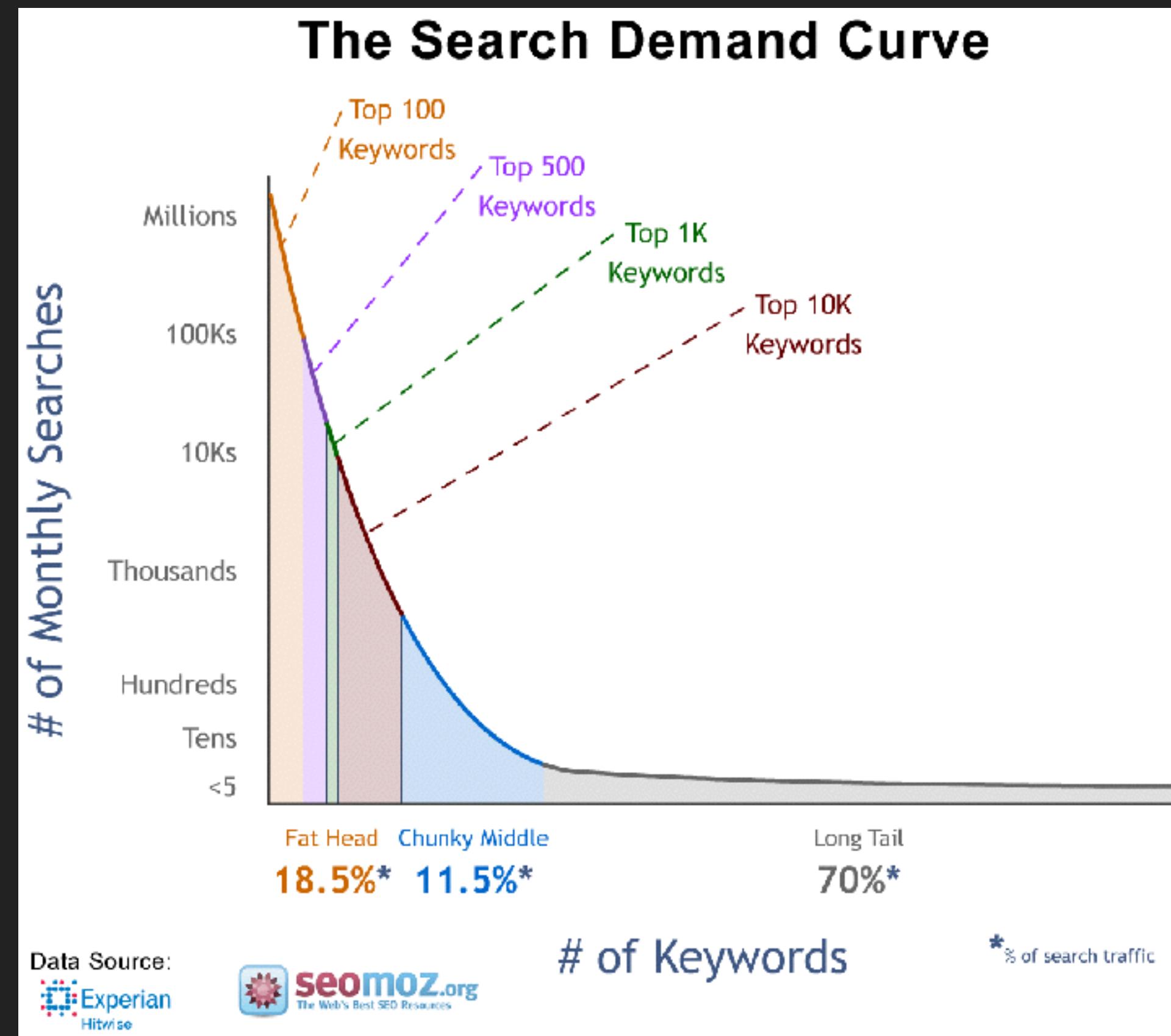
Traditional SEO - Page Rank

- ▶ Underlying assumption: “quality” of a site is proportional to the number of links to it
- ▶ The value of a link on a “quality site” is worth more



Traditional SEO

Long Tail Keywords



- ▶ “learn javascript” vs “SEO metadata video course”
- ▶ Keyword phrases which are very, very specific to whatever you are selling
- ▶ Site visitors are more likely to use when they're closer to a point-of-purchase
- ▶ <https://app.wordtracker.com/>
- ▶ <https://www.semrush.com/>

Traditional SEO

Google Keyword Planner

- ▶ Discover relevant keywords: [Google Keyword Planner](#)
- ▶ [Google Trends](#)

Google AdWords

SIGN IN START NOW →

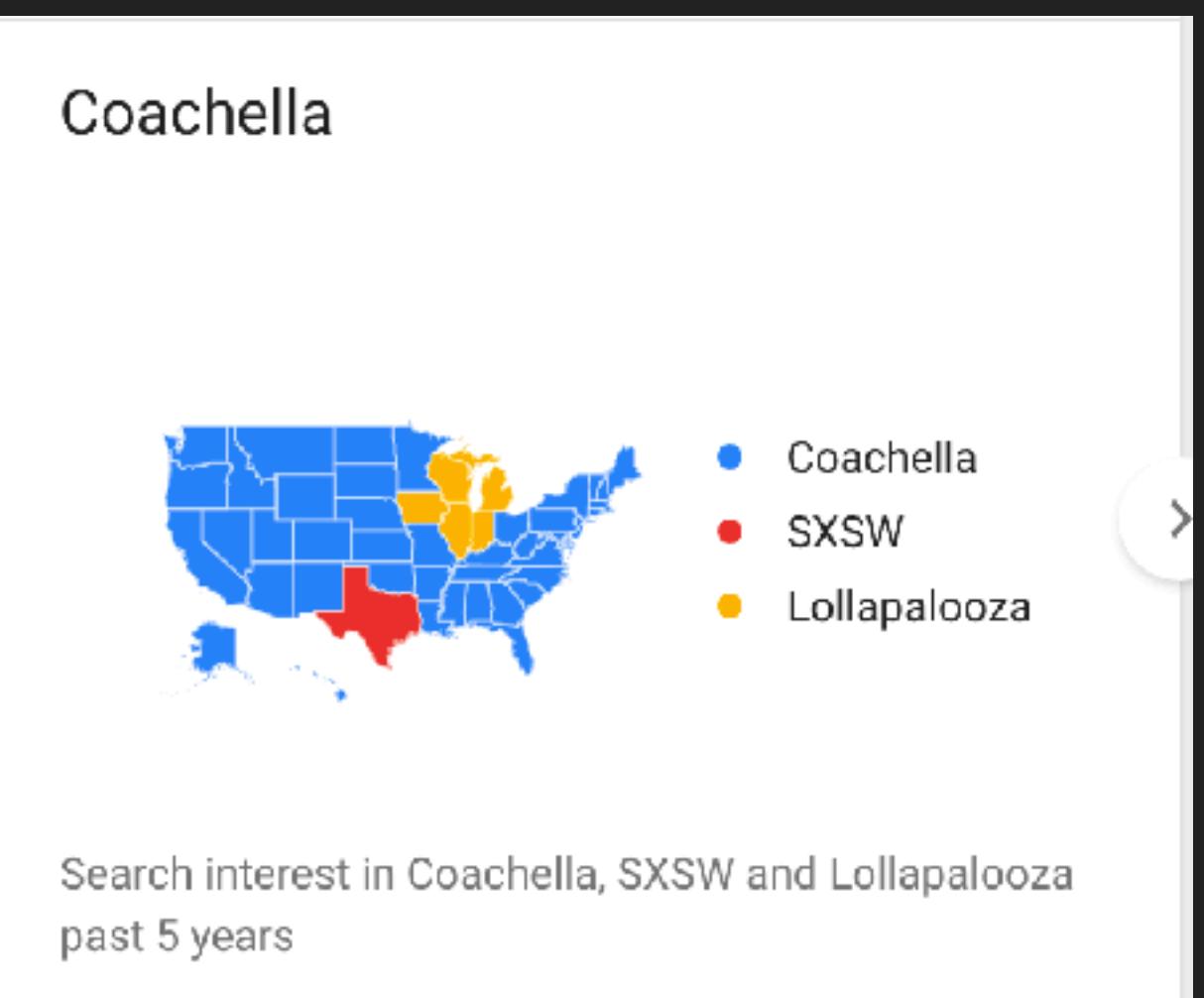
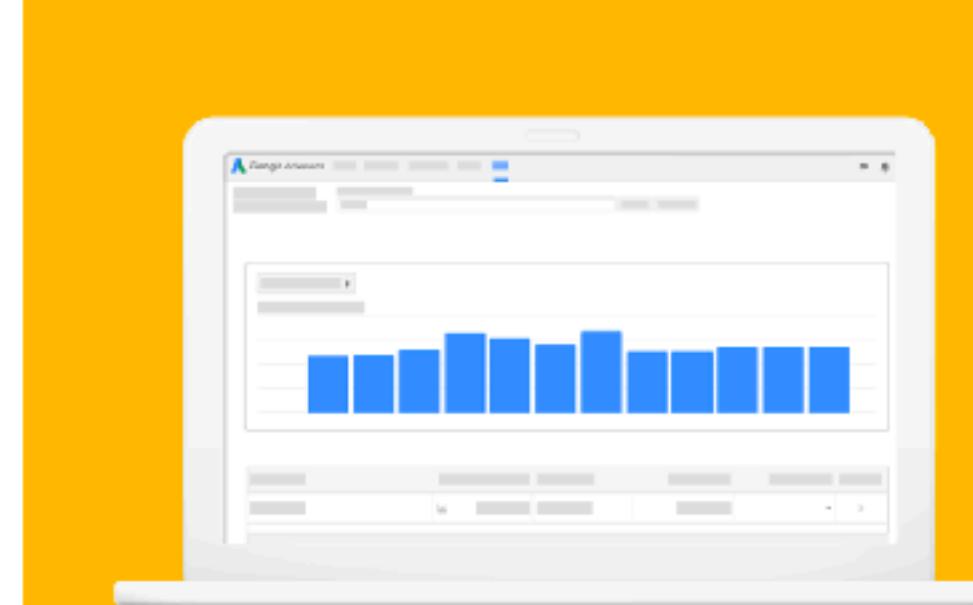
Home How it Works Pricing Marketing Goals Tools Resources

Overview Customer Match Manager Accounts **Keyword Planner** Display Planner Adwords Editor

Reach the right customers with the right keywords.

Get keyword ideas to help build your campaigns with the AdWords Keyword Planner.

START USING KEYWORD PLANNER ➔



DEMO

Traditional SEO

Link building campaign

- ▶ Create 'key pages' for popular product and services on your website
- ▶ Focus inbound links to key pages to build higher ranking pages
- ▶ 'Link velocity': rate at which a piece of content or a page earns links over time
- ▶ Guest post on trustworthy industry / authority sites
- ▶ Analyze competitors' link profile & identify link opportunities: Spyfu

DEMO



White Hat

Black Hat

Traditional SEO

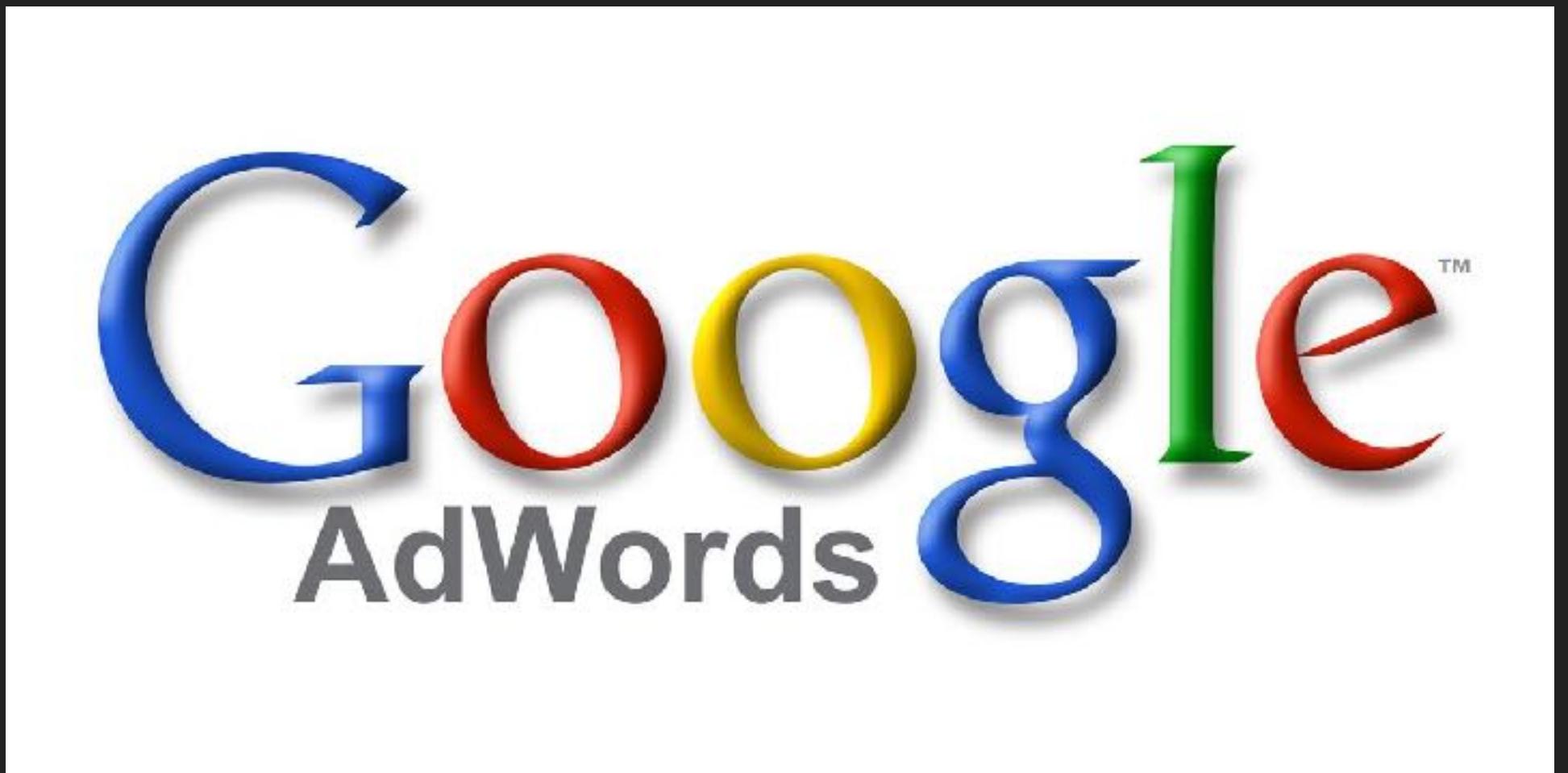
Eliminate bad links

- ▶ Use Google Search Console to review Search traffic & links
- ▶ Remove link reference from spammy websites
- ▶ Disavow bad links using [Google Disavow Tool](#)
- ▶ Eliminate mutual 'link exchange' with other sites - add [<rel="nofollow">](#)
- ▶ Remove dead links from your website

Traditional SEO

Ad Campaigns

- ▶ Target the right audience
- ▶ Cost effective
- ▶ Deploy marketing budget when it matters
- ▶ Short feedback loop
- ▶ Control over risk
- ▶ Not a magic pill



Traditional SEO

Ad Campaigns - Pricing

- ▶ CPM - Cost per 1000 impressions
- ▶ CPC - Cost per click
- ▶ CPA - Cost per action (conversion)
- ▶ CPI - Cost per install

Traditional SEO - Basic Metadata

- ▶ **title** - 30-65 characters

```
<title>Modern SEO</title>
```

- ▶ **description** - 120-156 characters. Brief summary of what the page is about

```
<meta name="description" content="Learn you some metadata for great good!">
```

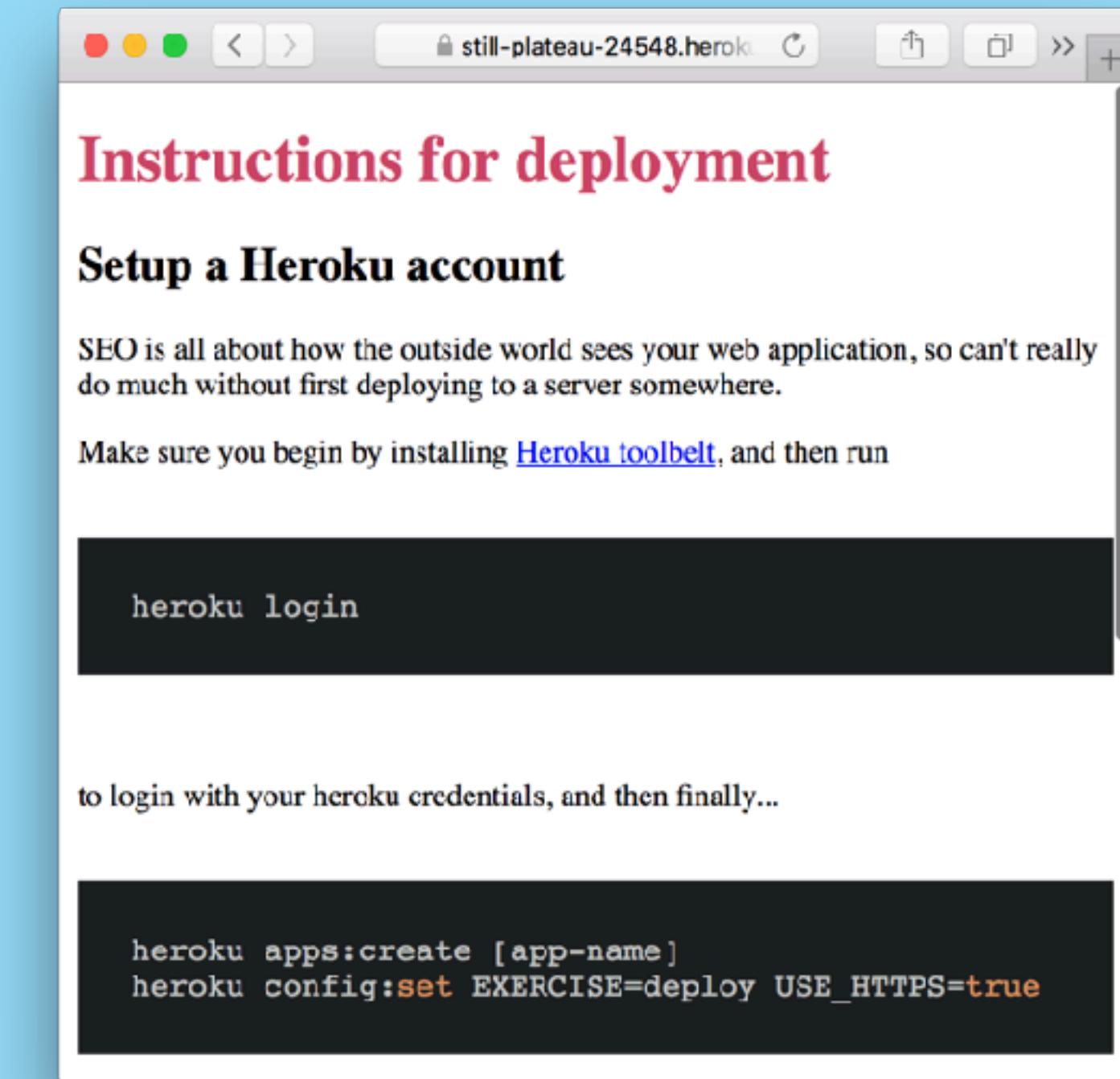
- ▶ **keywords** - don't matter anymore

```
<meta name="keywords" content="javascript, emberjs, reactjs, angularjs">
```

Exercise: Basic Metadata & Deploy

1

- ▶ Start the app up using the command below and follow the deploy instructions to set your app up on heroku
- ▶ Add basic metadata, including a title, description and keywords



Time: **15min**

Command to run: `./run -e deploy`



Social Metadata

Metadata Tools

- ▶ Google Structured Data Testing Tool - <https://search.google.com/structured-data/testing-tool>
- ▶ SEO META chrome extension - <http://www.seo-extension.com/>
- ▶ Facebook Opengraph debugger - <https://developers.facebook.com/tools/debug/>
- ▶ Twitter Card Validator - <https://cards-dev.twitter.com/validator>
- ▶ Pinterest Rich Card debugger - <https://developers.pinterest.com/tools/url-debugger/>

Facebook OpenGraph



Facebook OpenGraph

```
<meta property="og:url" content="http://www.nyti..01....html" />
<meta property="og:type" content="article" />
<meta property="og:title" content="When Grea ... ink Alike" />
<meta property="og:description" content="Does cu ... tive thinking?" />
<meta property="og:image" content="http://static ... umbo-v2.jpg" />
```

Facebook OpenGraph

```
<meta property="og:url" content="http://www.nyti..01....html" />
```

- ▶ Known as “canonical URL”
- ▶ Usually this will be the “desktop version”
- ▶ No session variables
- ▶ No pagination parameters or other counters

Fetched URL	https://www.amazon.com/Design-Patterns-Elements-Reusable-Object-Oriented/dp/0201633612/ref=sr_1_2
Canonical URL	https://www.amazon.com/dp/0201633612/ref=tsm_1_fb_lk 28 likes, shares and comments (More Info)

Facebook OpenGraph

```
<meta property="og:type" content="article" />
```

- ▶ Impacts how your URLs get enriched in users' media feeds
- ▶ Defaults to website

apps.saves	games.plays	restaurant.wants_to_visit	business.business	product.item
books.quotes	games.saves	sellers.rates	fitness.course	profile
books.rates	music.listens	video.rates	game.achievement	restaurant.menu
books.reads	music.playlists	video.wants_to_watch	music.album	restaurant.menu_item
books.wants_to_read	news.publishes	video.watches	music.playlist	restaurant.menu_section
fitness.bikes	news.reads	article	music.radio_station	restaurant.restaurant
fitness.runs	og.follows	book	music.song	video.episode
fitness.walks	og.likes	books.author	place	video.movie
games.achieves	pages.saves	books.book	product	video.other
games.celebrate	restaurant.visited	books.genre	product.group	video.tv_show

Facebook OpenGraph

```
<meta property="og:type" content="music.song" />
```

Wake Me Up (Conte Remix)

iTunes: <http://tinyurl.com/ConteWakeMeUp> Watch my YouTube video for this song, using 3D projection mapping: <http://www.youtube.com/watch?v=EfDfdyBldz0> Electro house plus some rage against the ma

SOUNDCLOUD.COM

Save

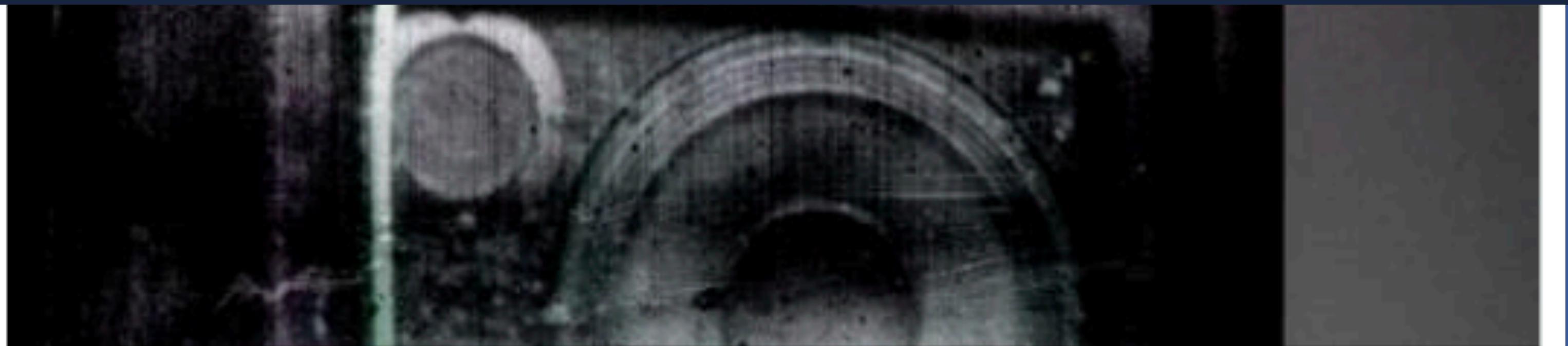
Facebook OpenGraph

```
<meta property="og:title" content="When Great ... ink Alike" />
```



Facebook OpenGraph

```
<meta property="og:description" content="Does cu ... tive thinking?" />
```



Wake Me Up (Conte Remix)

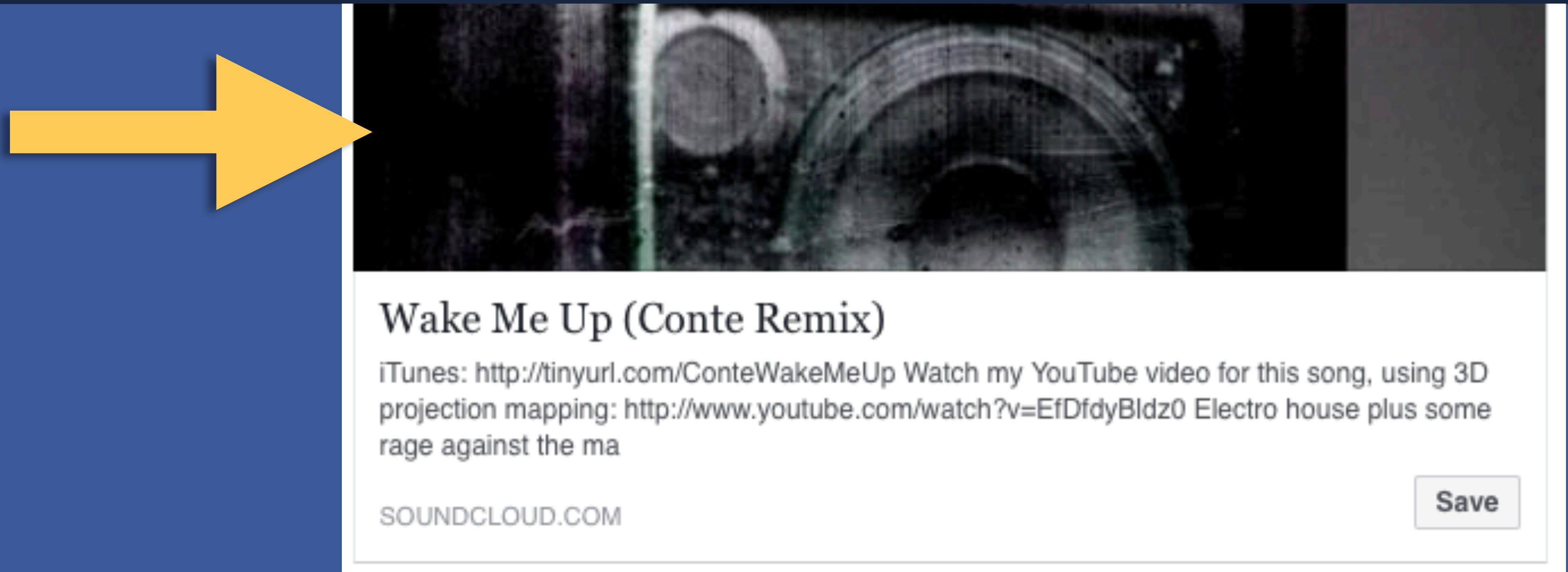
iTunes: <http://tinyurl.com/ConteWakeMeUp> Watch my YouTube video for this song, using 3D projection mapping: <http://www.youtube.com/watch?v=EfDfdyBldz0> Electro house plus some rage against the ma

SOUNDCLOUD.COM

Save

Facebook OpenGraph

```
<meta property="og:image" content="http://static ... umbo-v2.jpg" />
```



Facebook OpenGraph

```
<meta property="og:image" content="http://static ... umbo-v2.jpg" />
```

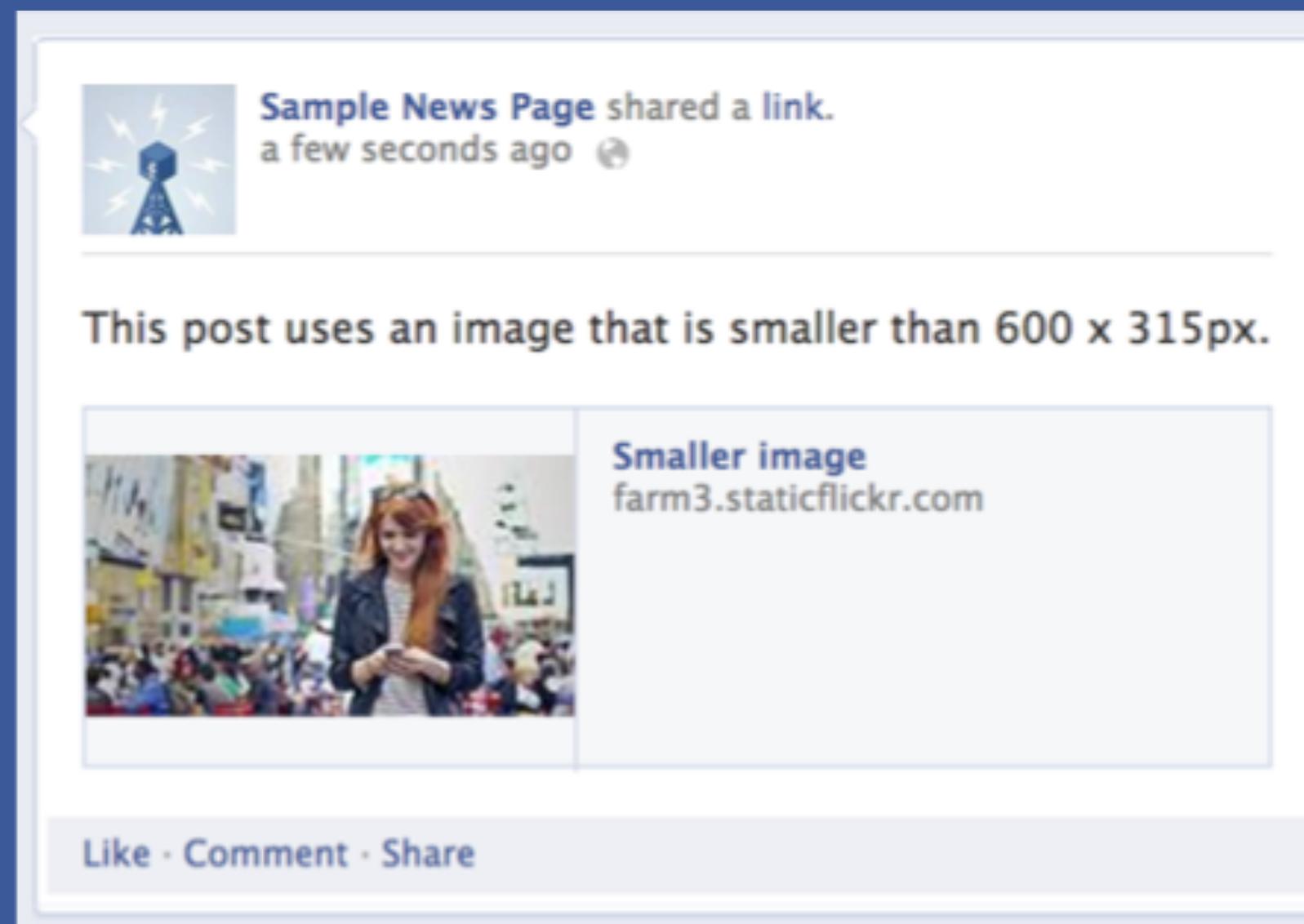
- ▶ Cached for lifetime of image URL (use caching strategy: immutable content)
- ▶ Must provide width & height for accurate first render
- ▶ Image size can change the way your URL is rendered!

```
<meta property="og:image:type" content="image/jpeg" />
<meta property="og:image:width" content="620" />
<meta property="og:image:height" content="541" />
```

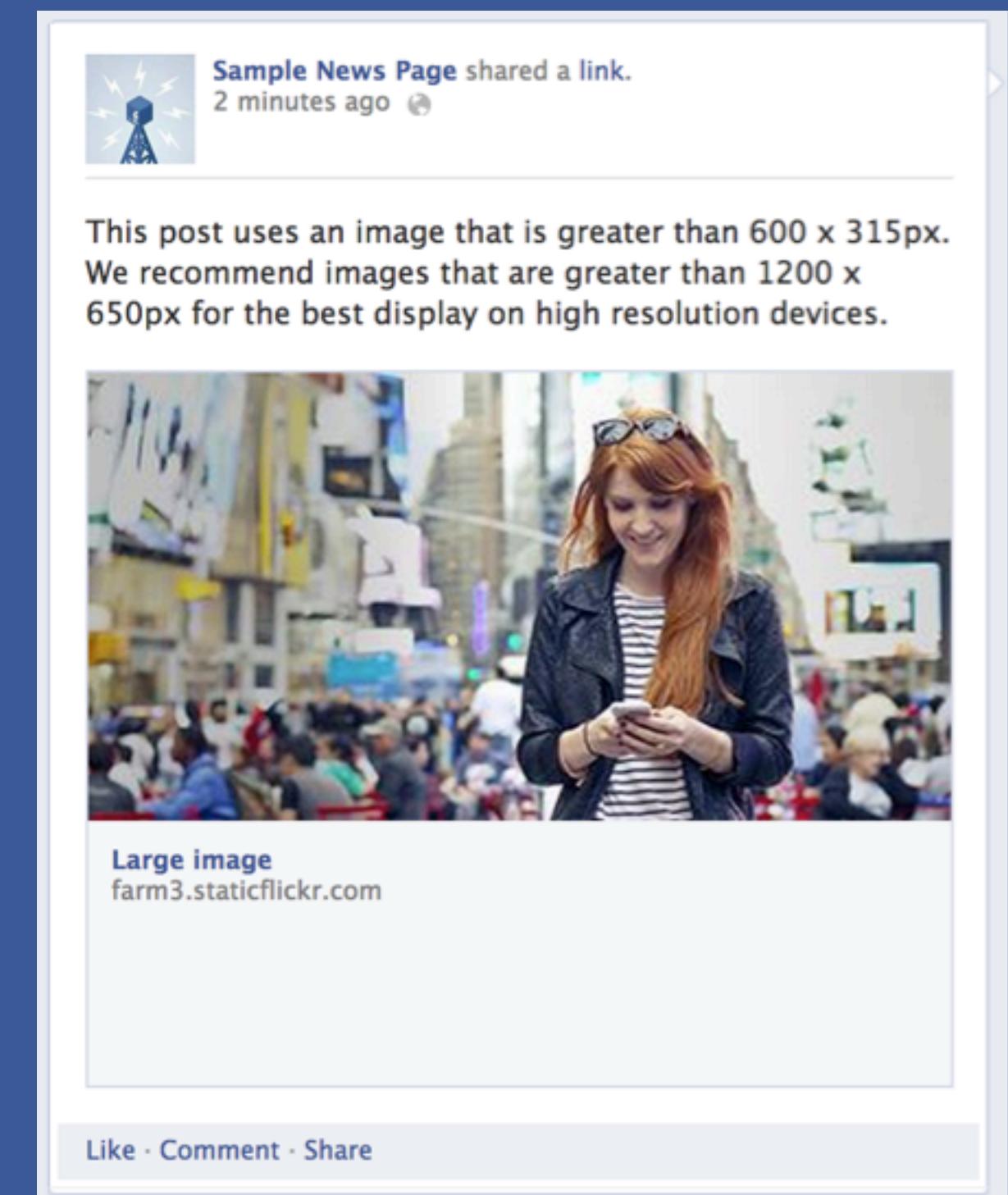
Facebook OpenGraph

<meta property="og:image" content="http://static...umbo-v2.jpg" />

< 600 x 315



>= 600 x 315



Recommended
1200x630

Exercise: Opengraph

2

- ▶ Enhance the program in the `exercises/opengraph` folder so that there's an enriched card whenever a link is shared on facebook
- ▶ This must include title, description and an image, in addition to any other required data
- ▶ HINT: here's what the data looks like <https://api.mike.works/api/v1/courses>
- ▶ Deploy to heroku and use the opengraph debugger to confirm your results

Time: 15min

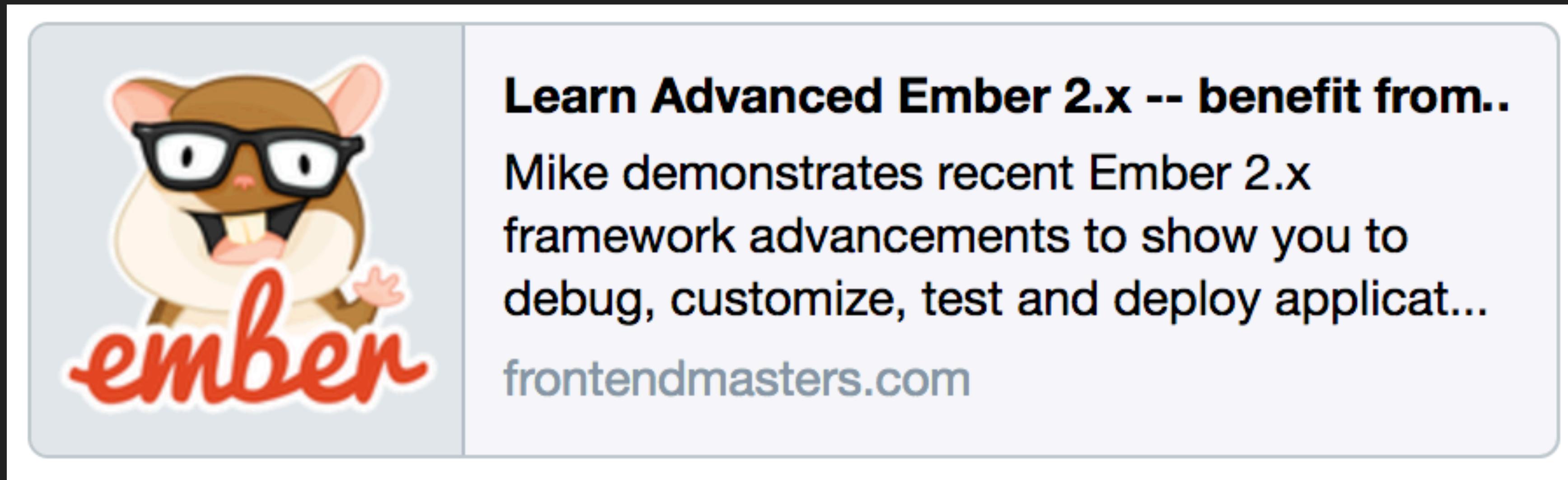
Command to run: `./run -e opengraph`

Twitter Cards

```
<meta name="twitter:card" content="summary" />
<meta name="twitter:site" content="@FrontEndMasters" />
<meta name="twitter:creator" content="@1Marc" />
```

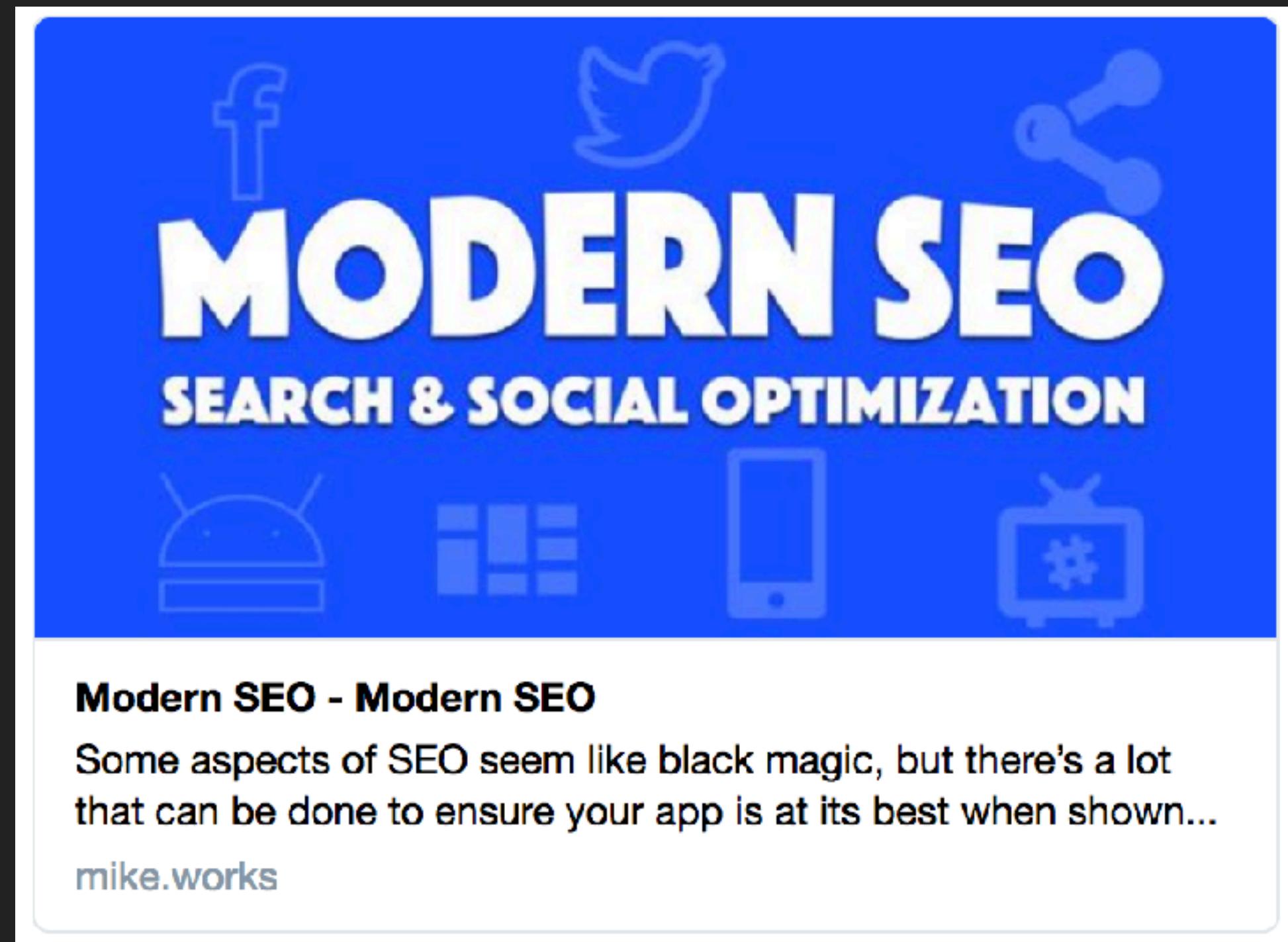
Twitter Cards

```
<meta name="twitter:card" content="summary" />
```



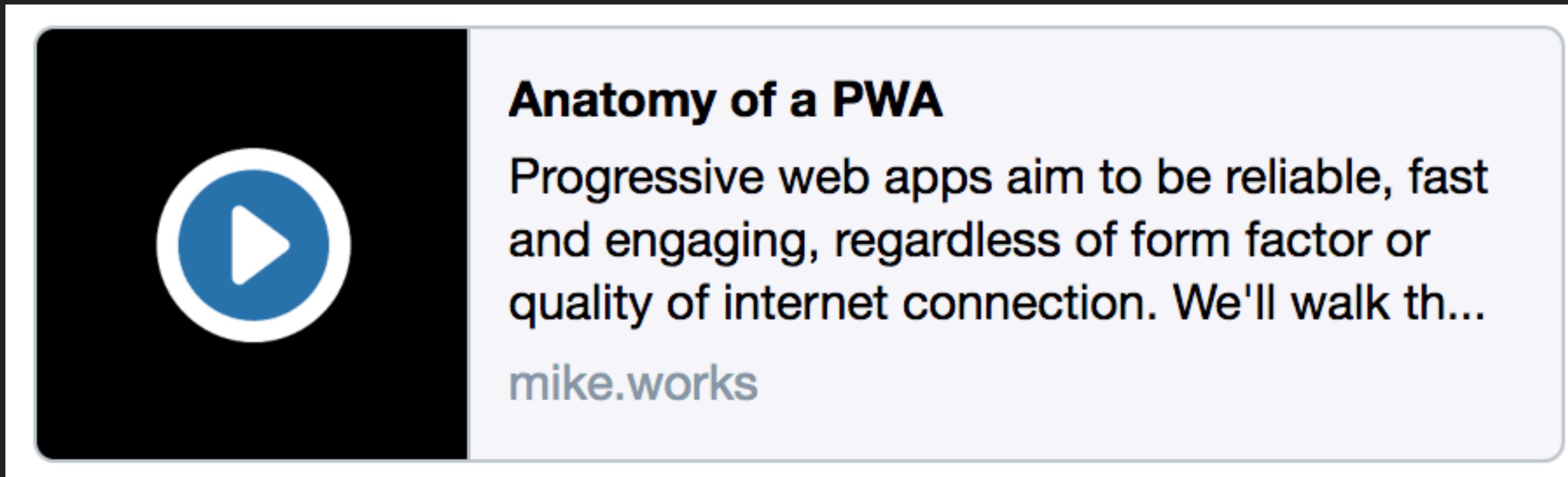
Twitter Cards

```
<meta name="twitter:card" content="summary_large_image" />
```



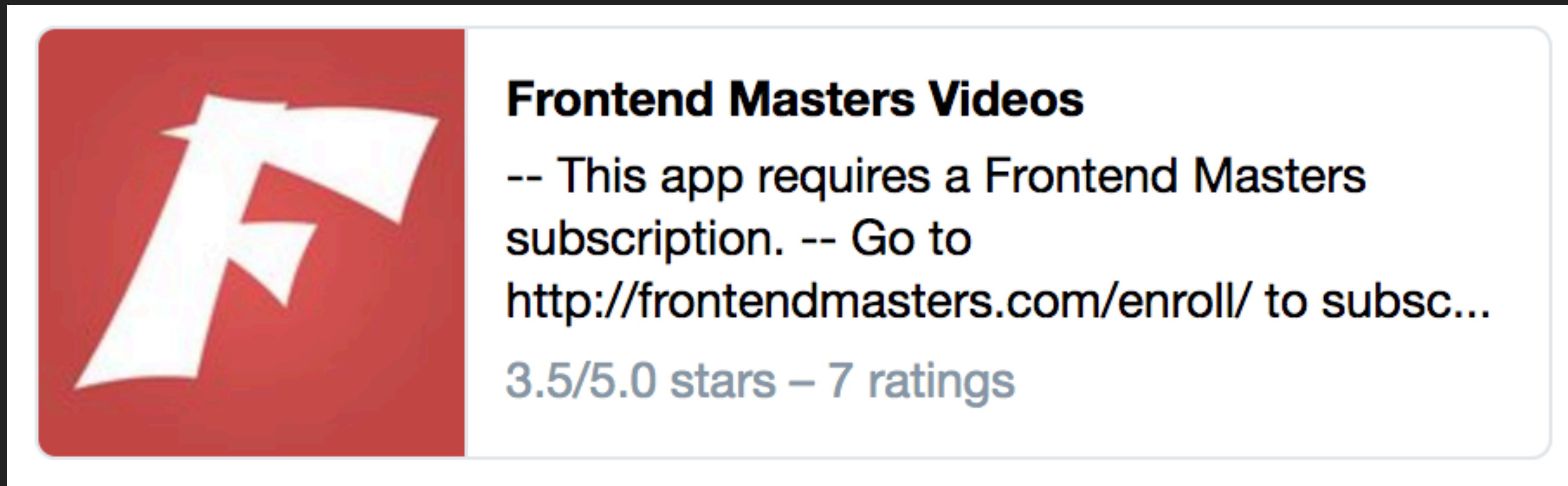
Twitter Cards

```
<meta name="twitter:card" content="player" />
```



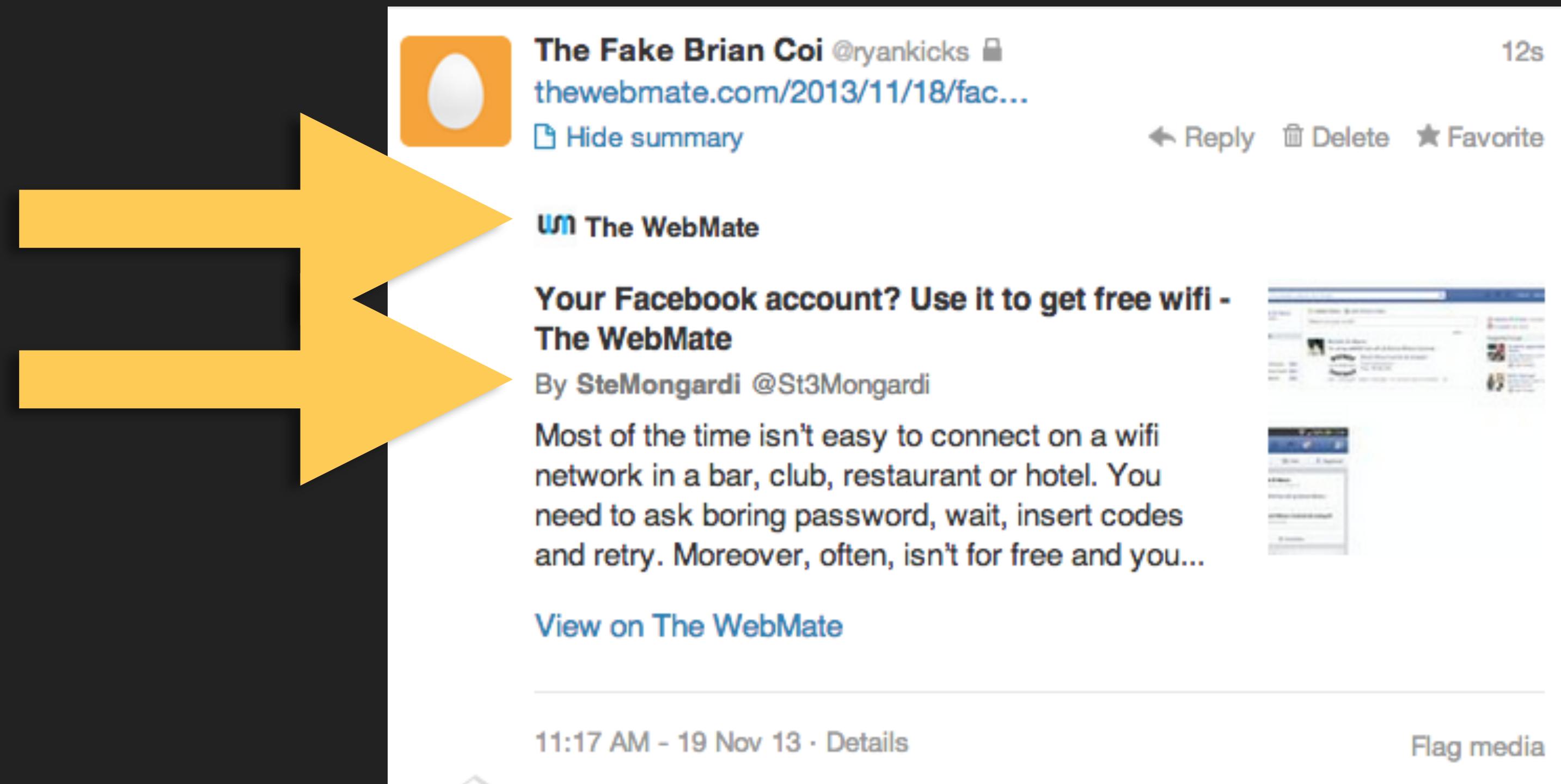
Twitter Cards

```
<meta name="twitter:card" content="app" />
```



Twitter Cards

```
<meta name="twitter:site" content="@FrontEndMasters" />  
<meta name="twitter:creator" content="@1Marc" />
```



2013

Twitter Cards

```
<meta name="twitter:image" content="http://...jpg" />
```

- ▶ 150x150 for summary
- ▶ 560x300 for summary_large_image



Exercise: Twitter Card

3

- ▶ Enhance the program in the `exercises/opengraph` folder so that there's an enriched card whenever a link is shared on twitter
- ▶ This must include title, description and an image, in addition to any other required data
- ▶ Use the `summary_large_image` card type, and be sure to use the "thumb2x" image size in a twitter-specific `img` meta tag
- ▶ Deploy to heroku and use the twitter card validator to confirm your results

Time: 15min

Command to run: `./run -e opengraph`

Pinterest Rich Pins

Article

Like Send Tried it! ... Save

CNN
Inside CERN's \$10 billion collider



Article from CNN

Read it

Scientists and technicians are hard at work upgrading the machinery so that the \$10 billion dollar Large Hadron Collider can ramp back up in 2015.

December 8, 2013
CNN Elizabeth Landau

CNN Elizabeth Landau
December 8, 2013

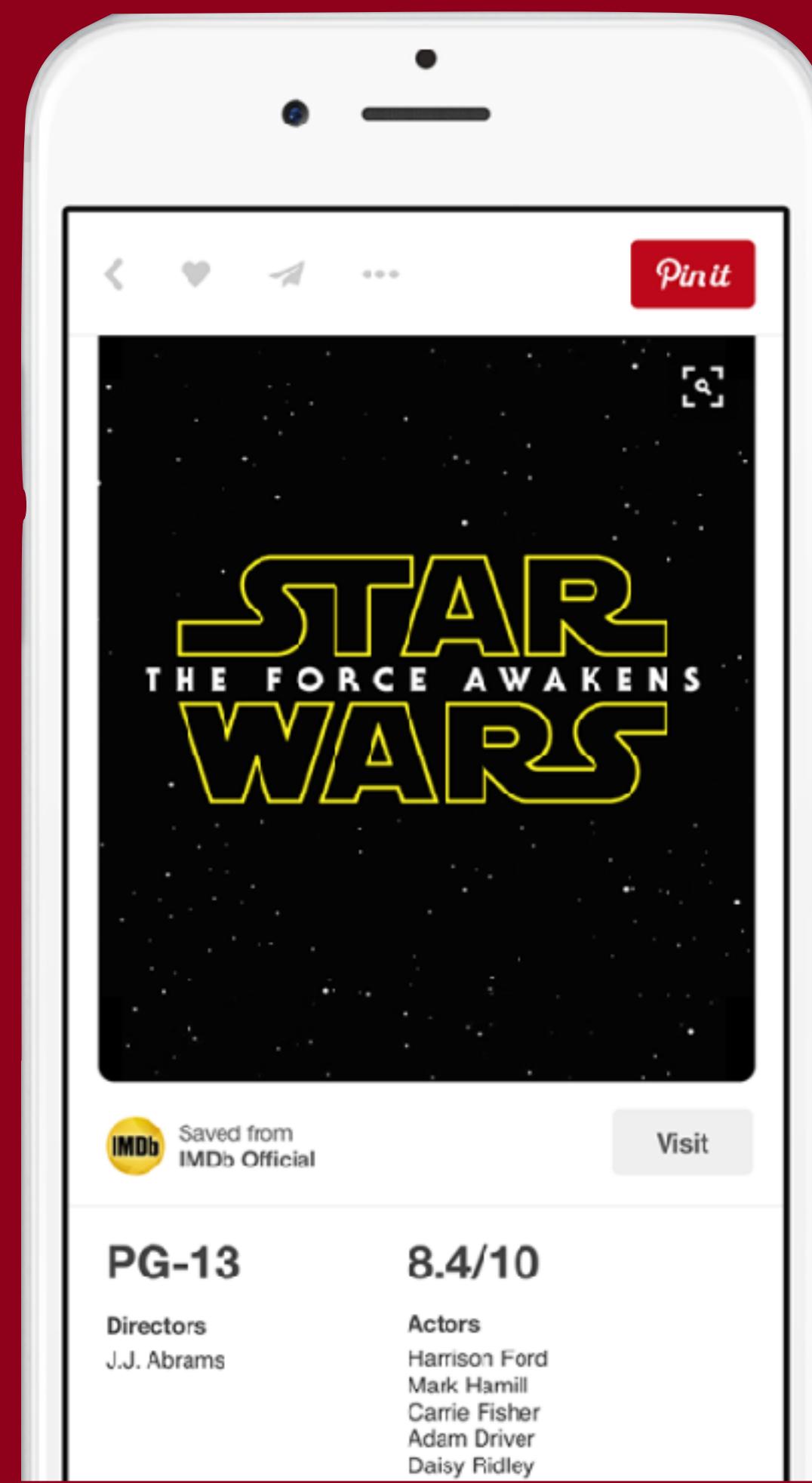
Recipe

Pinterest Rich Pins



Movie

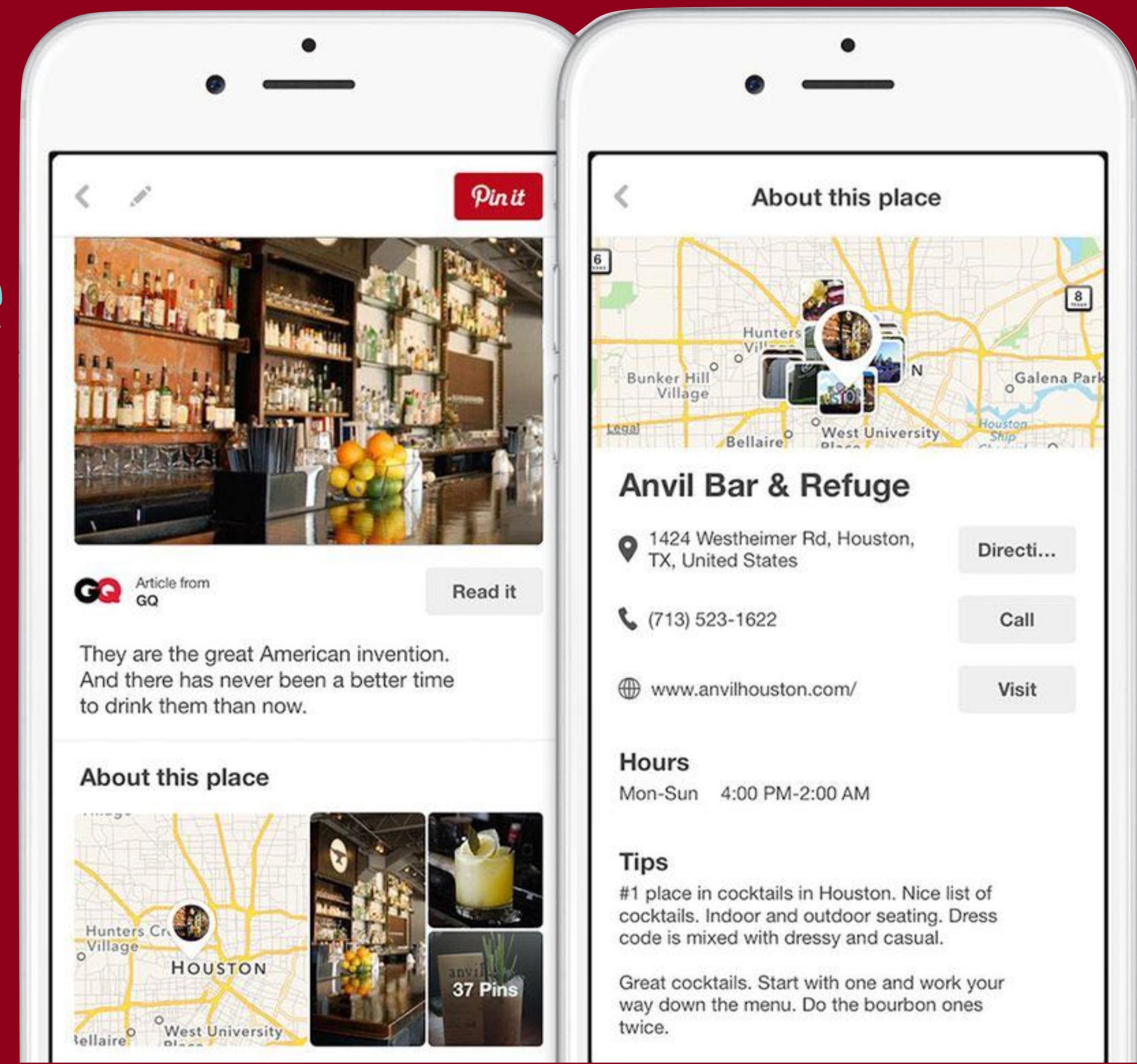
Pinterest Rich Pins



As of Jan
2017:
Not currently
visible

Pinterest Rich Pins

Place



As of Jan
2017:
Not currently
visible

Pinterest Rich Pins

```
<meta property="front_end_masters:location:latitude"
      content="44.977818" />
<meta property="front_end_masters:location:longitude"
      content="-93.270821" />
<meta property="front_end_masters:locality"
      content="Minneapolis" />
<meta property="front_end_masters:region"
      content="Minnesota" />
<meta property="front_end_masters:postal_code"
      content="55402" />
```



Structured Data

What's Structured Data?

- ▶ Information that crawlers are already looking for, and can easily read
- ▶ Consistent structure, across many web properties
- ▶ Preferred format: JSON-LD in a special script tag

```
<script type="application/ld+json">  
...  
</script>
```

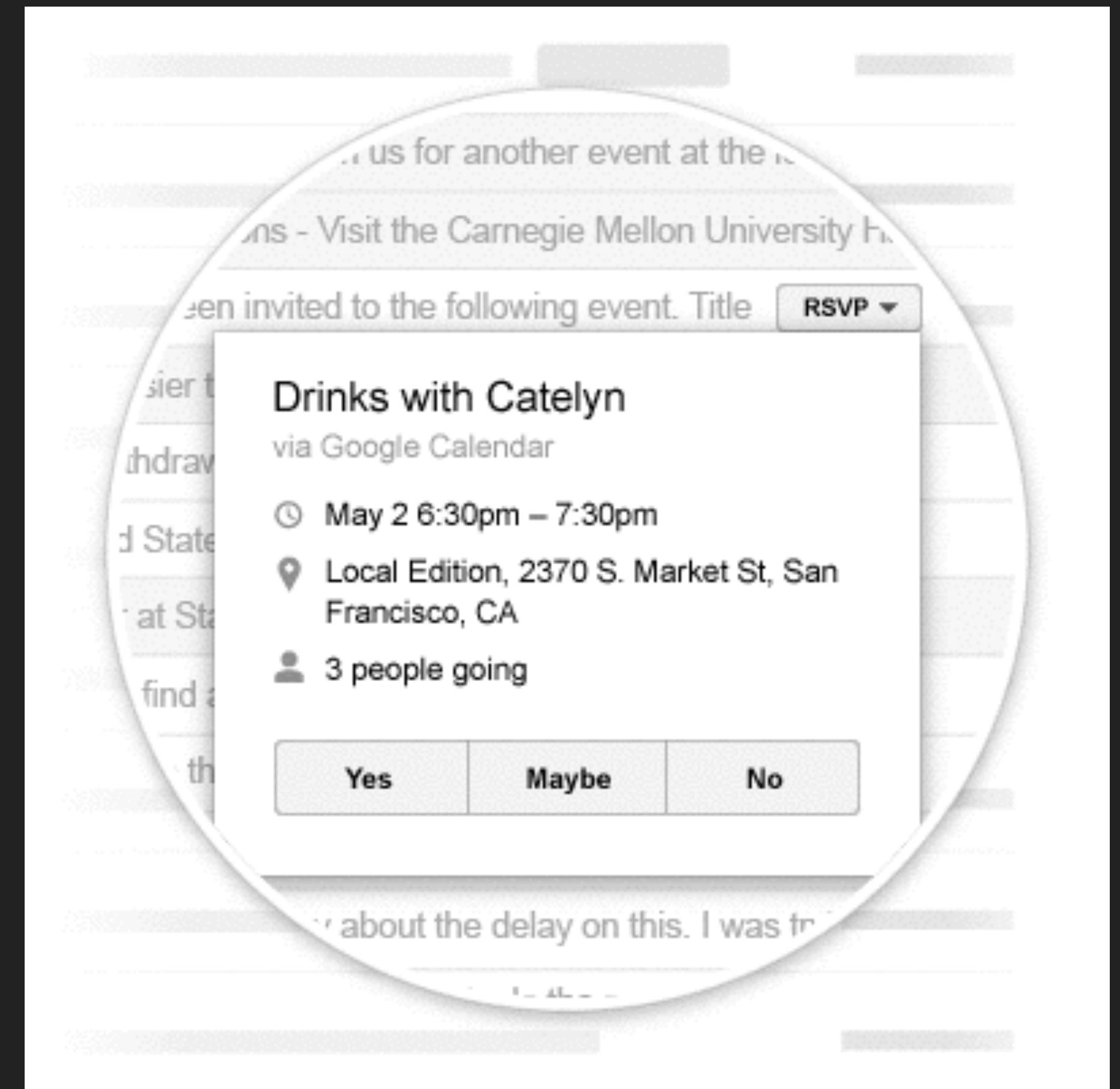
What's Structured Data?

- ▶ Information that crawlers are already looking for, and can easily read
- ▶ Consistent structure, across many web properties
- ▶ Preferred format: JSON-LD in a special script tag

```
<script type="application/ld+json">  
...  
</script>
```

What does this get us?

- ▶ Enhanced features in apps
- ▶ Indexers don't have to guess so much about connections between things
- ▶ More control over the way search results look



EVENTS

[San Francisco Party Events | Eventbrite](#)
[Eventbrite](#) › [ca-san-francisco](#) › [parties](#)

Mobile-friendly - Looking for the best parties that San Francisco has to offer? Find your next great experience on Eventbrite.

[Best SF Party 5/6 ...](#)

Fri, May 6 Temple Nightclub, San ...

[Hip Hop Massive Party ...](#)

Fri, May 6 HUE Lounge ...

[SET with CARLO LIO at ...](#)

Fri, May 6 Verso, San Francisco ...

[Lava Lite Classic Lava Lamp, Purple/Blue - Walmart.com](#)

[Walmart](#) › [Lava-2118-Lava-Lite-Classic-](#)...

★★★★★ Rating: 3.5 - 60 votes - \$13.17 - In stock

Mobile-friendly - Buy Lava Lite Classic Lava Lamp, Purple/Blue at Walmart.com.

PRODUCTS



[The Nightingale by Kristin Hannah – Reviews ...](#)

Goodreads app - Installed

★★★★★ Rating: 4.5 - 159,018 votes

The Nightingale has 159018 ratings and 21386 reviews. Emily May said: "Oh, for heaven's ... More lists with this book.

[Open on goodreads.com](#)

REVIEWS

RECIPES

 Epicurious



Texas-Style Barbecued Brisket

3.5/4 ★★★★☆ (12)

Ingredients: 1 teaspoon ground cumin, 2 teaspoons sugar, 1 teaspoon freshly ground black pepper, 6 cups hickory or mesquite chips or chunks, soaked for 1 hour in cold water to cover and drained, 4 to 8 hours for curing the meat (optional); also, allow yourself about 6 hours cooking time, 1 tablespoon coarse salt (kosher or sea), 1 tablespoon chili powder, Indirect grilling, 1 beef brisket (5 to 6 pounds), with a layer of fat at least 1/4 inch thick, preferably 1/2 inch thick

[Arduino Courses | Coursera](#)
[Coursera](#) › [courses](#) › [query=arduino](#)

An Introduction to Programming the Internet of Thi...
Design, create, and deploy a fun IoT device using Arduino a...

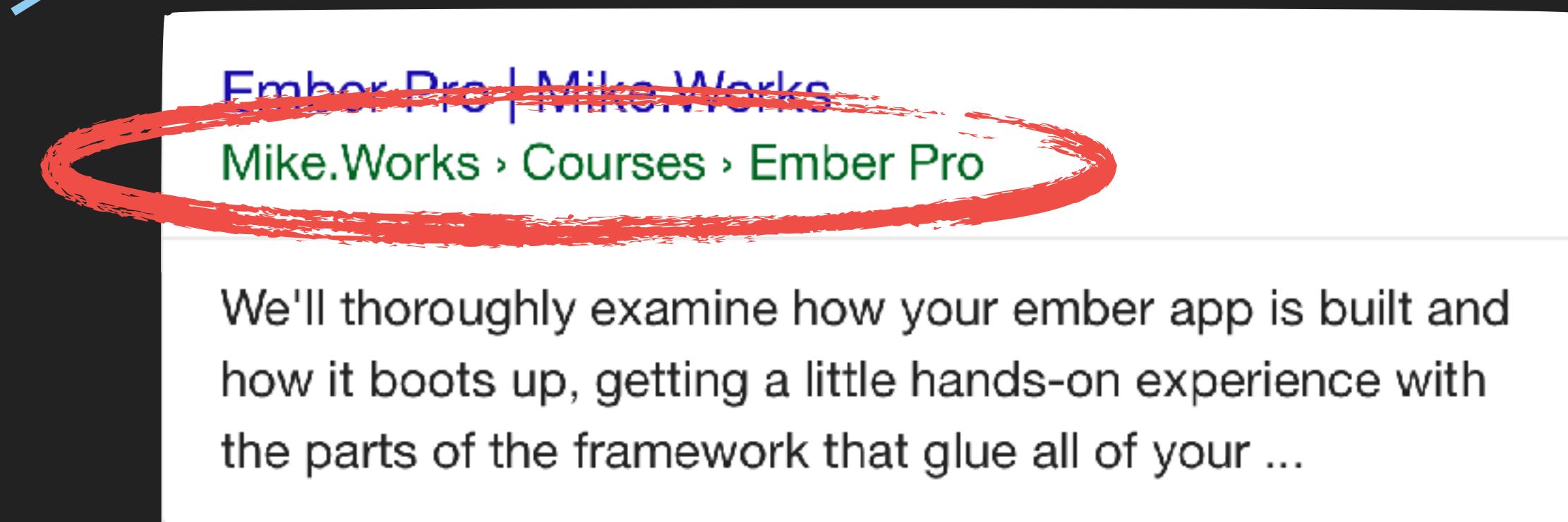
The Arduino Platform and C Programming
The Arduino is an open-source computer hardware/softwar...
University of California, Irvine

Building Arduino robots and devices
For many years now, people have been improving their tool...
Moscow Institute of Physics and Technology

PRODUCTS

Breadcrumbs

```
<script type="application/ld+json">
{
  "@context": "http://schema.org",
  "@type": "BreadcrumbList",
  "itemListElement": [
    {
      "@type": "ListItem",
      "position": 1,
      "item": {
        "@id": "https://example.com/books",
        "name": "Books",
        "image": "http://example.com/images/icon-book.png"
      }
    },
    {
      "@type": "ListItem",
      "position": 2,
      "item": {
        "@id": "https://example.com/books/authors",
        "name": "Authors"
      }
    }
  ]
}</script>
```



Full Hierarchy

Schema.org is defined as two hierarchies: one for textual property values, and one for the things that they describe.

Thing

This is the main schema.org hierarchy: a collection of types (or "classes"), each of which has one or more parent types. Although a type may have more than one super-type, here we show each type in one branch of the tree only. There is also a parallel hierarchy for [data types](#).

Select vocabulary view:

Core vocabulary Core plus all extensions

Core plus extension vocabularies

- [Thing](#)
 - [Action](#)
 - [AchieveAction](#)
 - [LoseAction](#)
 - [TieAction](#)
 - [WinAction](#)
 - [AssessAction](#)
 - [ChooseAction](#)
 - [VoteAction](#)
 - [IgnoreAction](#)

Organization

Canonical URL: <http://schema.org/Organization>

Organization

An organization such as a school, NGO, corporation, club, etc.

Usage: Over 1,000,000 domains

[\[more...\]](#)

Property	Expected Type	Description
Properties from Organization		
address	PostalAddress or Text	Physical address of the item.
aggregateRating	AggregateRating	The overall rating, based on a collection of reviews or ratings, of the item.
alumni	Person	Alumni of an organization. Inverse property: alumniOf .
areaServed	AdministrativeArea or GeoShape or Place or Text	The geographic area where a service or offered item is provided. Supersedes serviceArea .
award	Text	An award won by or for this item. Supersedes awards .
brand	Brand or Organization	The brand(s) associated with a product or service, or the brand(s) maintained by an organization or business person.
contactPoint	ContactPoint	A contact point for a person or organization. Supersedes contactPoints .

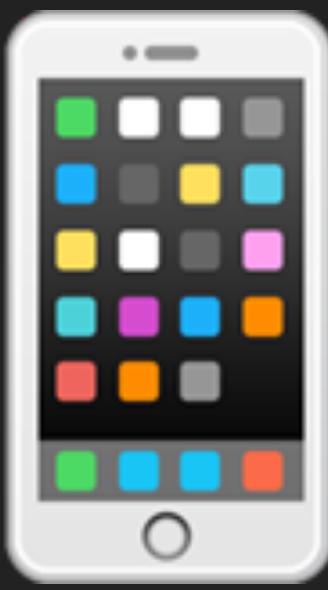
Exercise: Course Data

4

- ▶ Enhance the program in the `exercises/opengraph` folder so that google's structured data tester detects structured data for...
 - ▶ courses - <https://developers.google.com/search/docs/data-types/courses>
 - ▶ breadcrumbs - <https://developers.google.com/search/docs/data-types/breadcrumbs>
- ▶ Validate your app using the Google structured data testing tool - <https://search.google.com/structured-data/testing-tool>

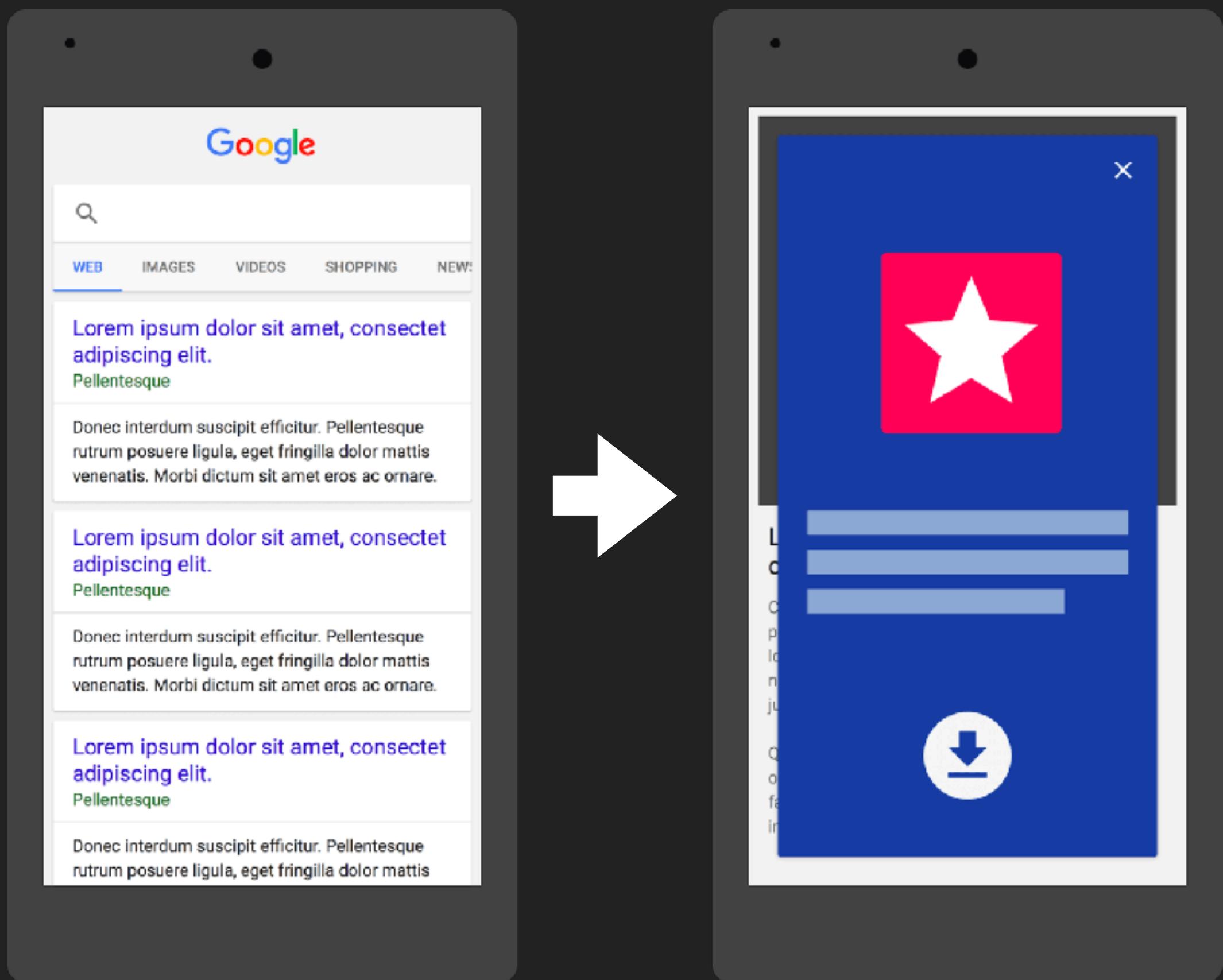
Time: 15min

Command to run: `./run -e opengraph`



Mobile Optimizations

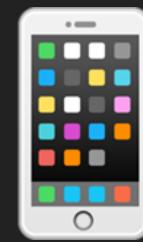
The Mobile Index Split



Viewport

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

width	positive integer or 'device-width'
initial-scale	positive number between 1.0 and 10.0
maximum-scale	positive number between 1.0 and 10.0
minimum-scale	positive number between 1.0 and 10.0
user-scalable	yes or no



Fullscreen

```
<meta name="apple-mobile-web-app-capable" content="yes">
```

Black Status Bar

```
<meta name="apple-mobile-web-app-status-bar-style" content="black">
```

Home Screen Title

```
<meta name="apple-mobile-web-app-title" content="Frontend Masters">
```

manifest.json

```
<link rel="manifest" href="/manifest.json">  
{  
  "name": "Frontend Masters",           // App name  
  "icons": [],                          // Various sizes of icon  
  "theme_color": "#2d89ef",             // Title bar styling  
  "background_color": "#2d89ef",         // Used for startup screen  
  "display": "standalone"               // Launch as an app  
}
```

manifest.json

```
{  
  "name": "Frontend Masters",           // App name  
  "icons": [                            // Various sizes of icon  
    ],  
  "theme_color": "#2d89ef",             // Title bar styling
```

manifest.json

```
{  
  "name": "Frontend Masters",           // App name  
  "icons": [],                          // Various sizes of icon  
  "theme_color": "#2d89ef",             // Title bar styling  
  "background_color": "#2d89ef",         // Used for startup screen  
  "display": "standalone"               // Launch as an app  
}
```

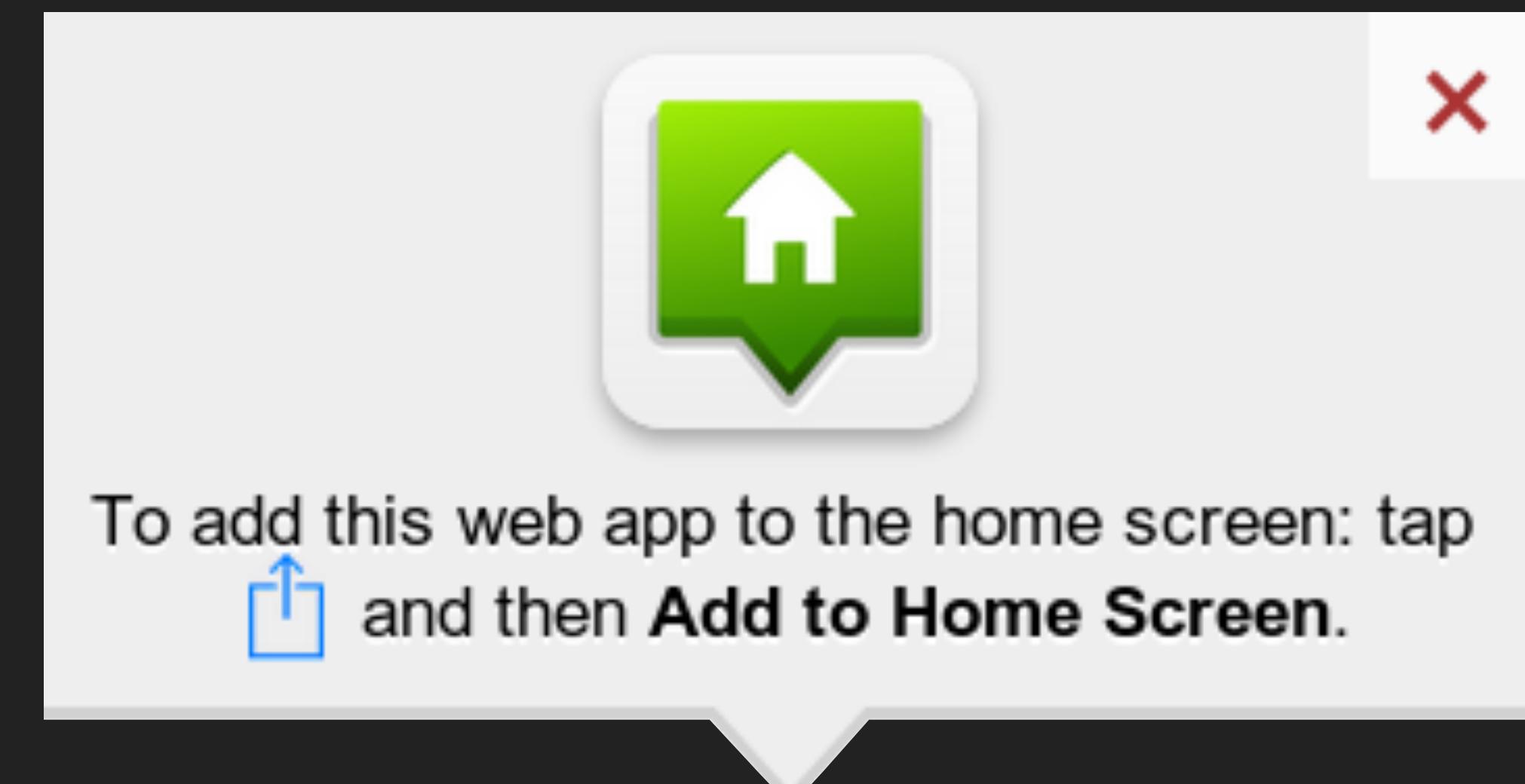
manifest.json - “display”

Display Mode	Description
fullscreen	All available display area is used
standalone	Look & feel like a standalone app
minimal-ui	“light browser” UI. Doesn’t have own window
browser	Conventional web app in a browser

Home Screen Icons

Size	Device
57	iPhone 1, 2
72	iPad 1, 2
114	iPhone 4 (Retina)
120	iPhone 6, 7, SE
144	iPad 3 (Retina)
152	iPad Air, Air 2, Mini
167	iPad Pro
180	iPhone 6+, 7+
128	Android Regular
192	Android High Res

```
<link href="https://placehold.it/152"  
      sizes="152×152"  
      rel="apple-touch-icon">
```



Home Screen Icons

<https://github.com/cubiq/add-to-homescreen>

```
addToHomescreen({  
  appID: 'modern.seo', // local storage name (no need to change)  
  message: 'Add to home?', // the message can be customized  
  modal: false, // block UI until the message is closed  
  mandatory: false, // can't proceed if you don't add to homescreen  
});
```

Exercise: Mobile Optimizations

5

- ▶ Enhance the program in the `exercises/mobile` folder to add mobile-specific enhancements to the app's index page
 - ▶ Add a viewport meta tag
 - ▶ Add home screen icons, and use `addToHomescreen()`
 - ▶ Create a `manifest.json` in the `mobile/public` folder, and add the corresponding meta tag to your `index.hbs`
 - ▶ Launch app in “fullscreen mode” from home screen in mobile safari

Time: 20min

Command to run: `./run -e mobile`



AMP

•ooooo T-Mobile LTE 9:19 PM 1 * 57% 🔋
SEARCH tesla

ALL NEWS IMAGES MAPS VIDEOS SHOP

Top stories

Tesla semi-truck debuts in September, pickup by 2019
Fox News - 7 hours ago ⚡ AMP

Elon Musk: Tesla will unveil a semi-truck in September
CNN Money - 6 hours ago

REUTERS

Tesla jumps after Elon Musk teases commercial truck, pickup
⚡ AMP - 7 hours ago

Los Angeles Times

Elon Musk says Tesla truck to debut in September, kicking cle
⚡ AMP - 4 hours ago

People also search for

How AMP Works

- ▶ Keep third party JS off the critical path
- ▶ Execute AMP JS asynchronously
- ▶ Size all resources in advance
- ▶ Don't let anything block rendering
- ▶ All CSS is inline, and < 50KB
- ▶ Webfonts start downloading immediately
- ▶ Resources prefetched early, but loaded lazily
- ▶ Preconnect for downloading above-the-fold content

Special AMP Considerations - Getting Started

```
<script async src="https://cdn.ampproject.org/v0.js"></script>
```

- ▶ AMP Runtime runs the show
- ▶ Validates your AMP in the JS console

```
<style amp-boilerplate> /* ... */ </style>
```

- ▶ Must include exactly this style block

Special AMP Considerations - Images

- ▶ `img` tag is not good enough for a few reasons
 - ▶ `srcset` is important, and not supported everywhere
 - ▶ must know dimensions without downloading the image
 - ▶ doesn't let the AMP runtime decide when to load resources

`<amp-img`

`src="welcome.jpg"`

`alt="Welcome"`

`height="400"`

`width="800">`

`</amp-img>`

Special AMP Considerations - Styles

```
<style amp-custom> /* custom CSS */ </style>
```

- ▶ Inline styles must have `amp-custom` attribute
- ▶ `!important` is not allowed
- ▶ `transition`: only GPU-accelerated properties allowed (opacity, transform)

Exercise: AMP

- ▶ Flesh out the app in the `exercises/amp` folder, so that it resembles the app we had for the opengraph example
- ▶ Your page must pass the [AMP Validator](#). Your JS console will give you similar validation feedback
- ▶ Deploy to heroku

Time: **25min**

Command to run: `./run -e amp`