# Information Design

Professor Danne Woo

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ARTS 269

Spring 2019

Tuesday 2:00PM – 5:50PM

I-Building 201

# Interactive Data Viz

Week 8: Data, the Web and Datavisual

Week 9: JavaScript and jQuery

Week 10: JavaScript and APIs

Week 11: In Class Work

Week 12: JavaScript and D3

Week 13: In Class Work

Week 14: Final

# API – Application Programming Interface

# What is an API?

**Access Key:** ks93yb8231971jn2u3ib

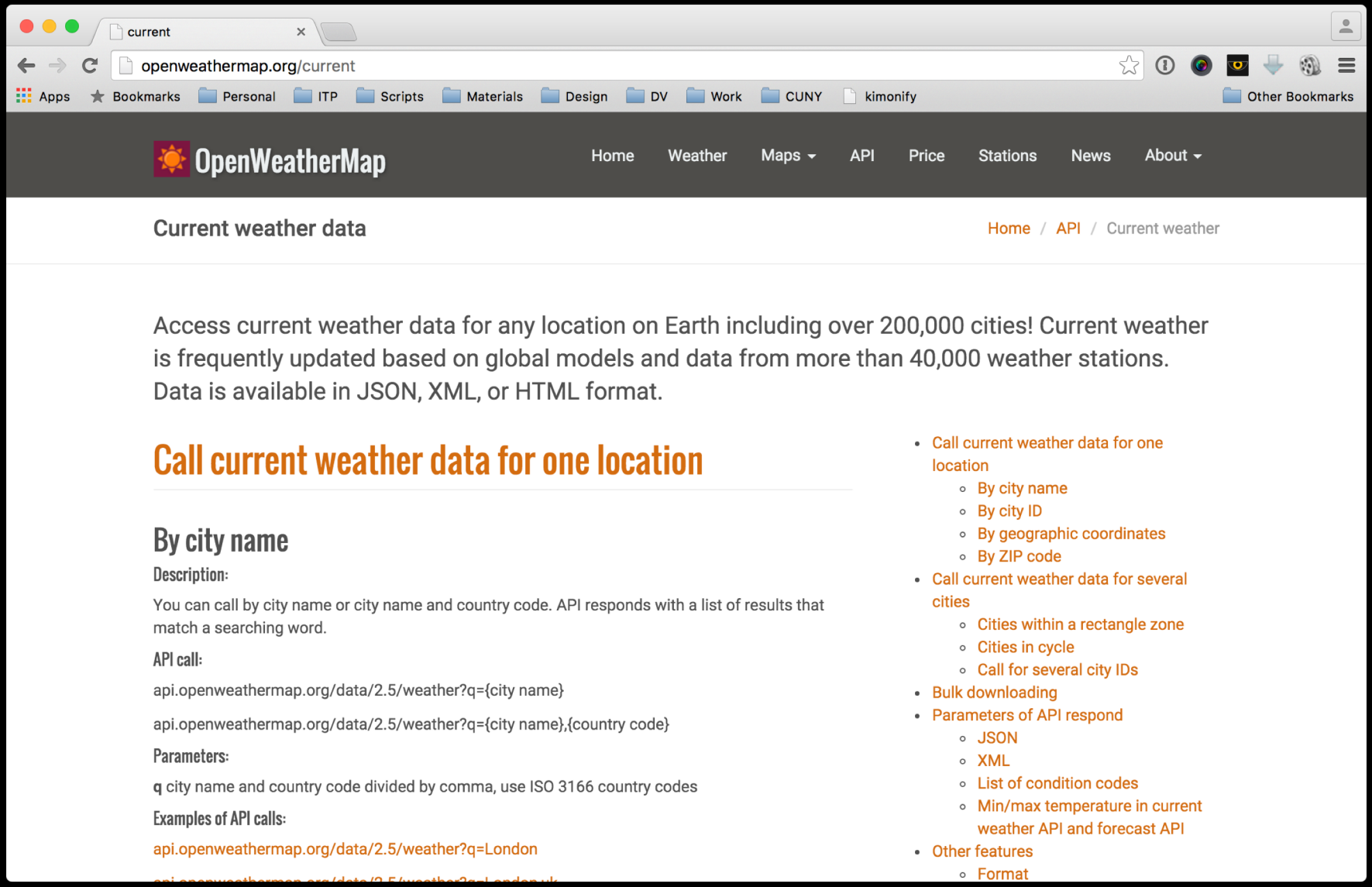
**Secret Key:** hk245khbhbip4i56i7o3mdnroq

## API URLs

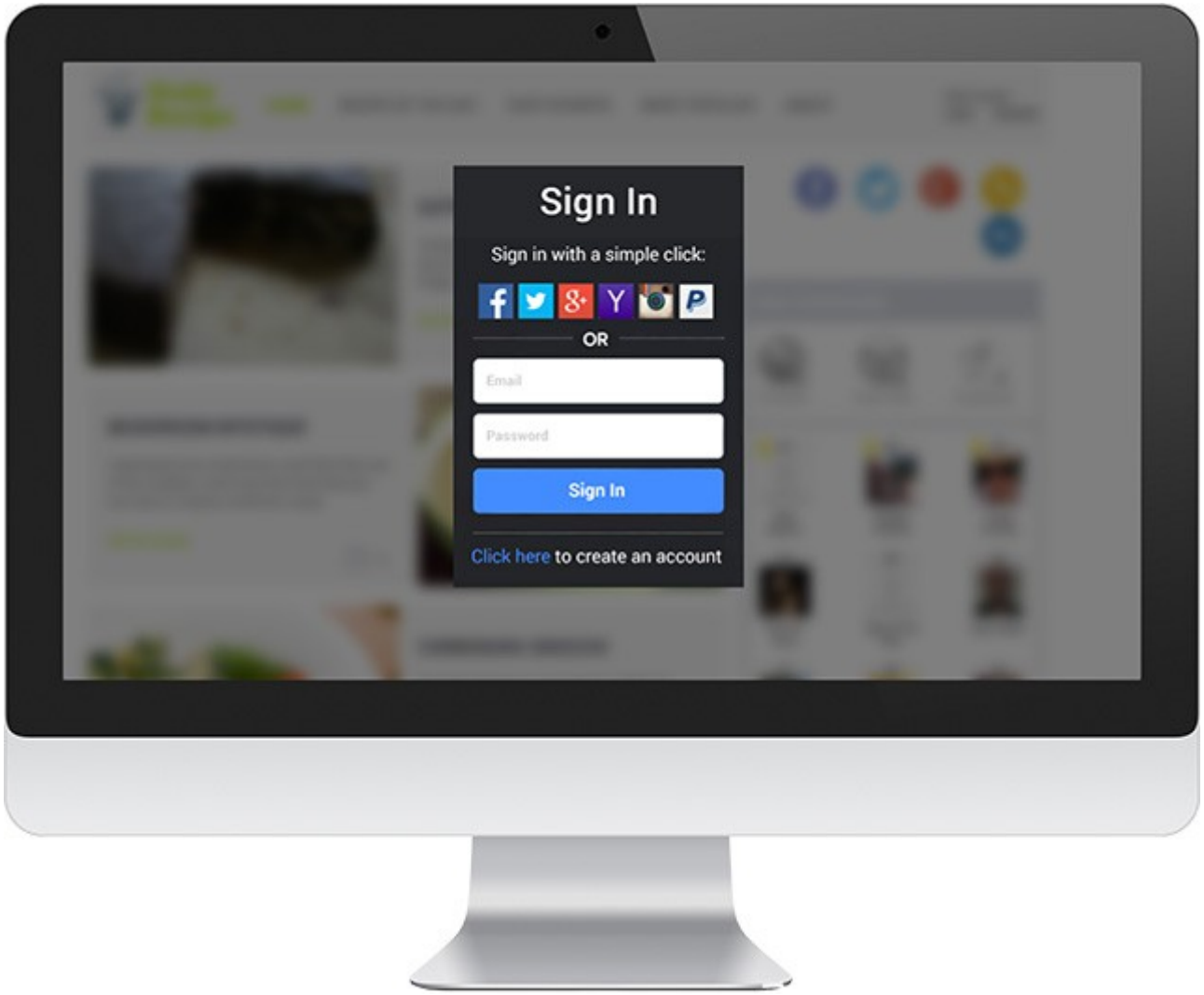
http://www.apiwebsite.com/…query…access key

http://api.openweathermap.org/data/2.5/weather?q=London,uk&appid=2de143494c0b295cca9337e1e96b00e0

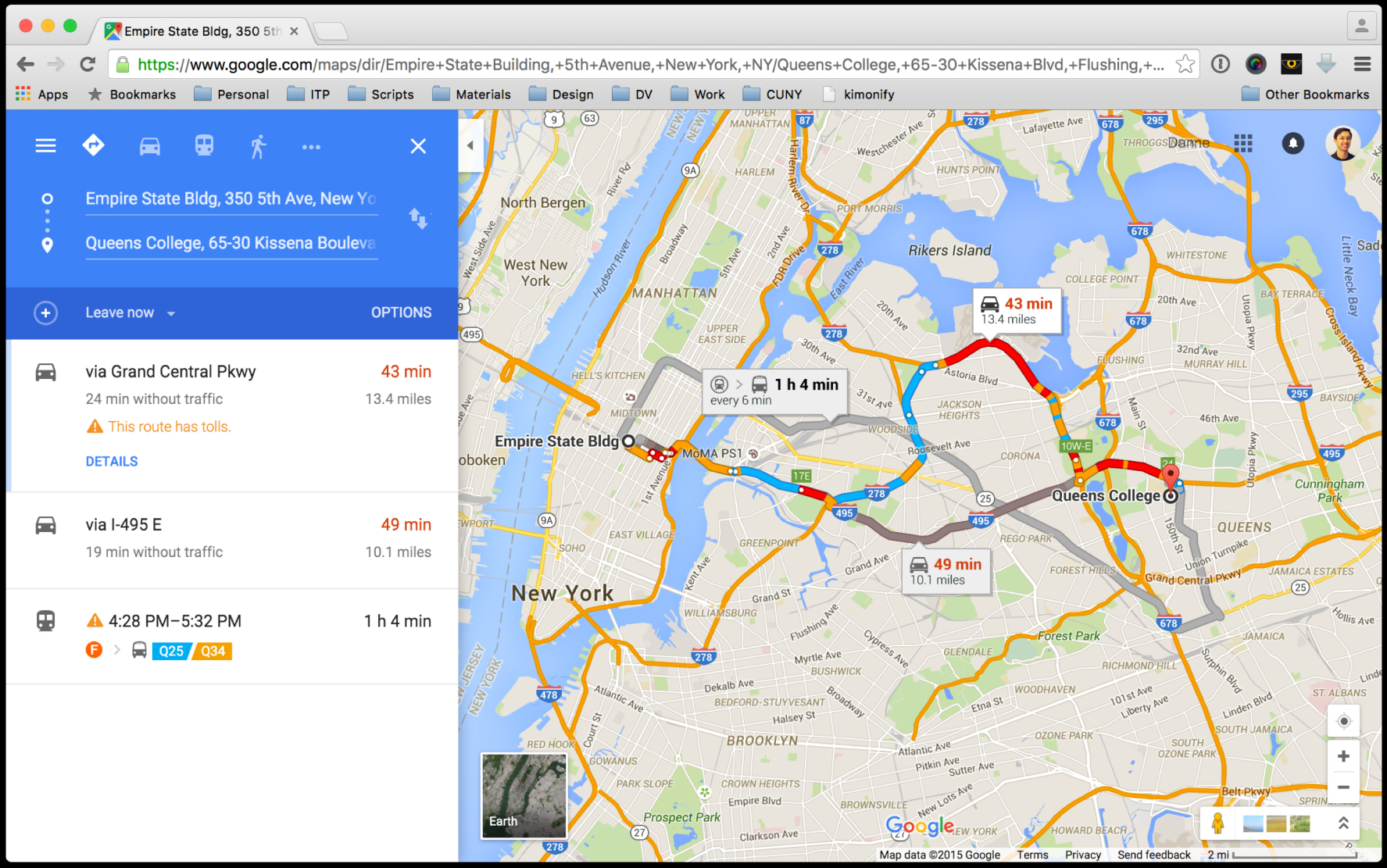
# Documentation



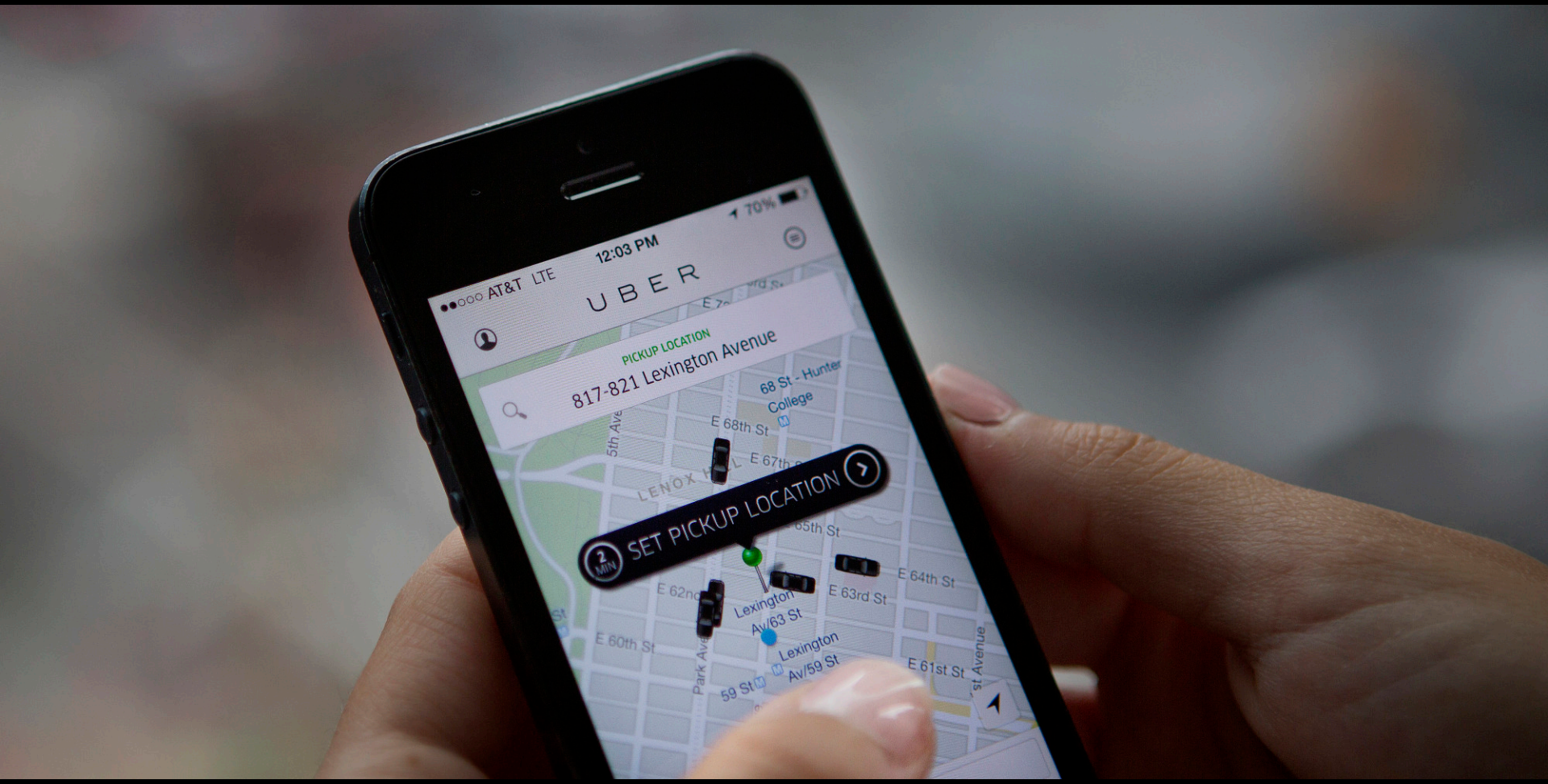
# User Authentication



# Google Maps API

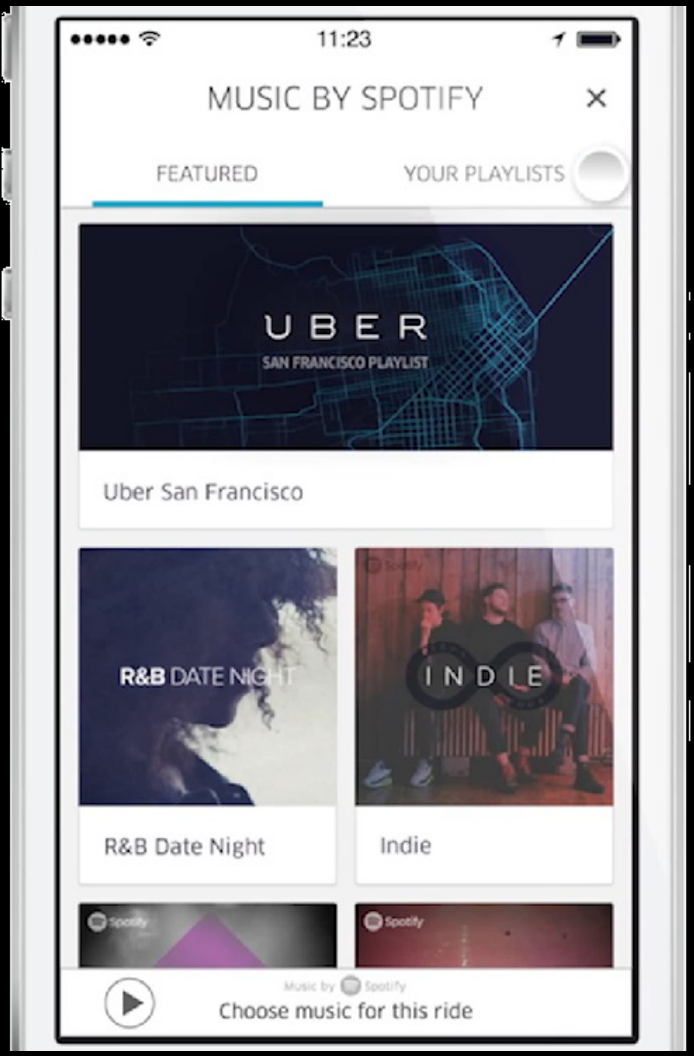


# Google Maps + Uber



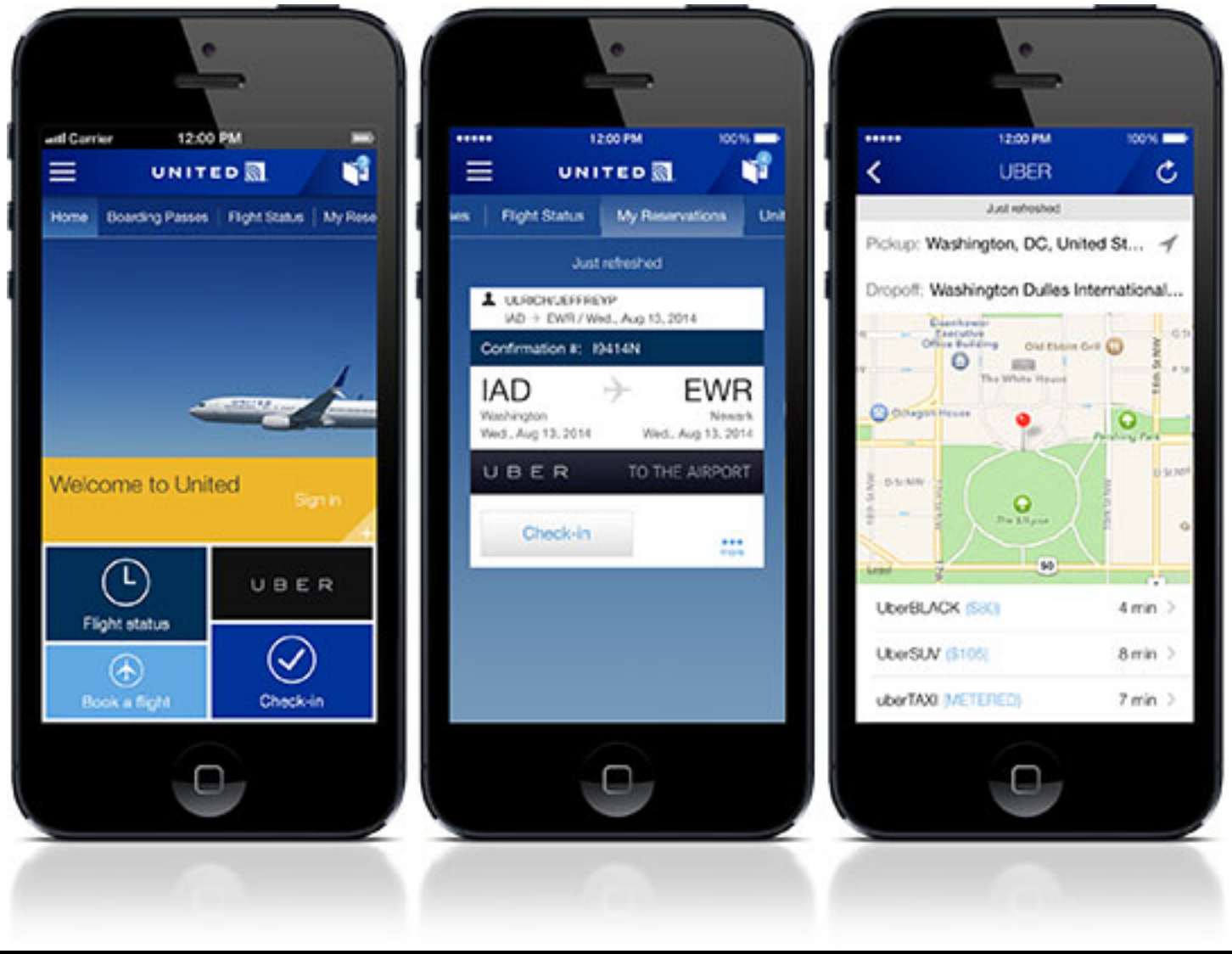
# Uber + Spotify

UBER



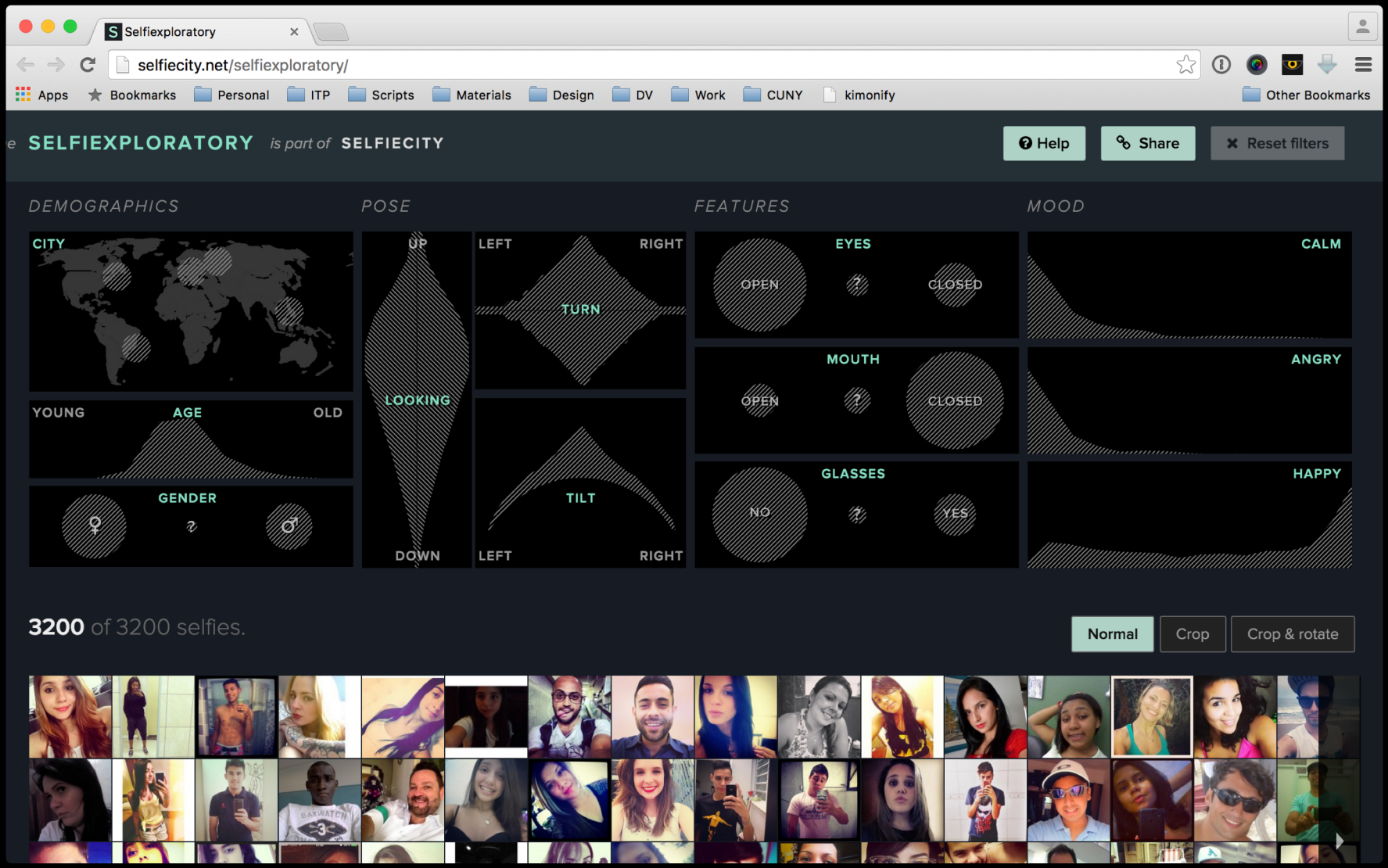

Spotify

# Uber + United App



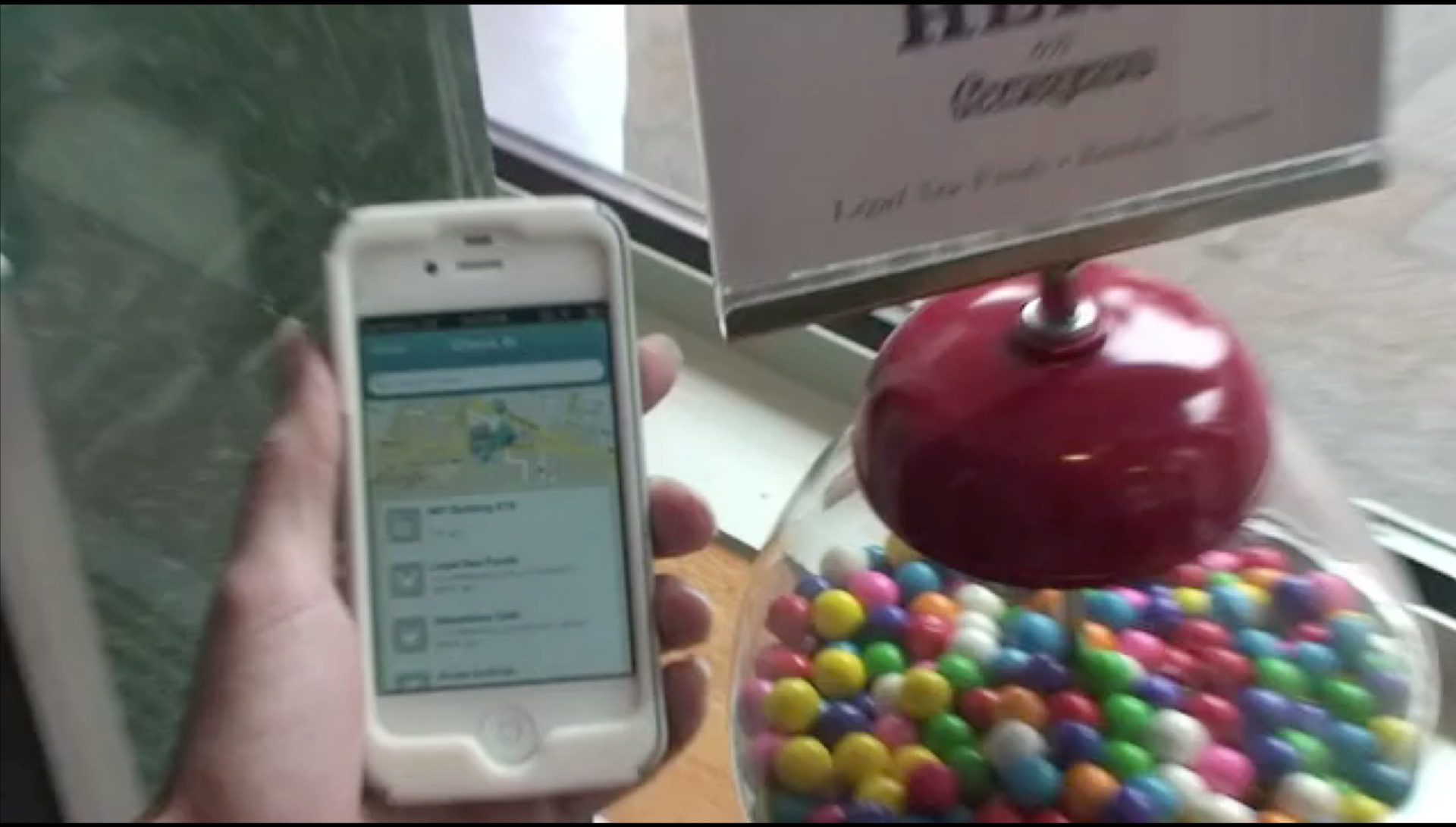
# Spotify and D3js

# Instagram and Mechanical Turk



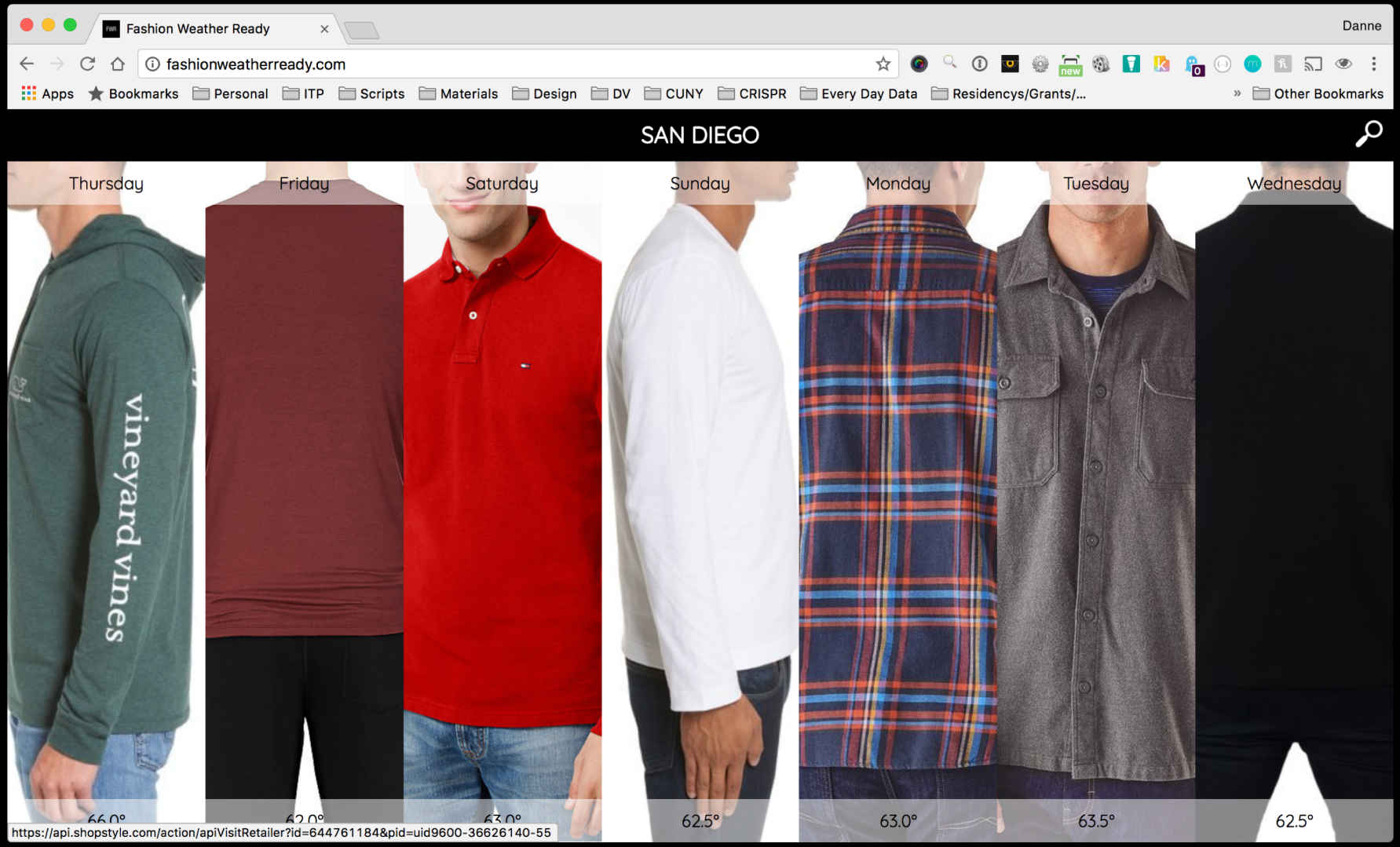
# Vuforia and MTA

# Foursquare and Raspberry Pi

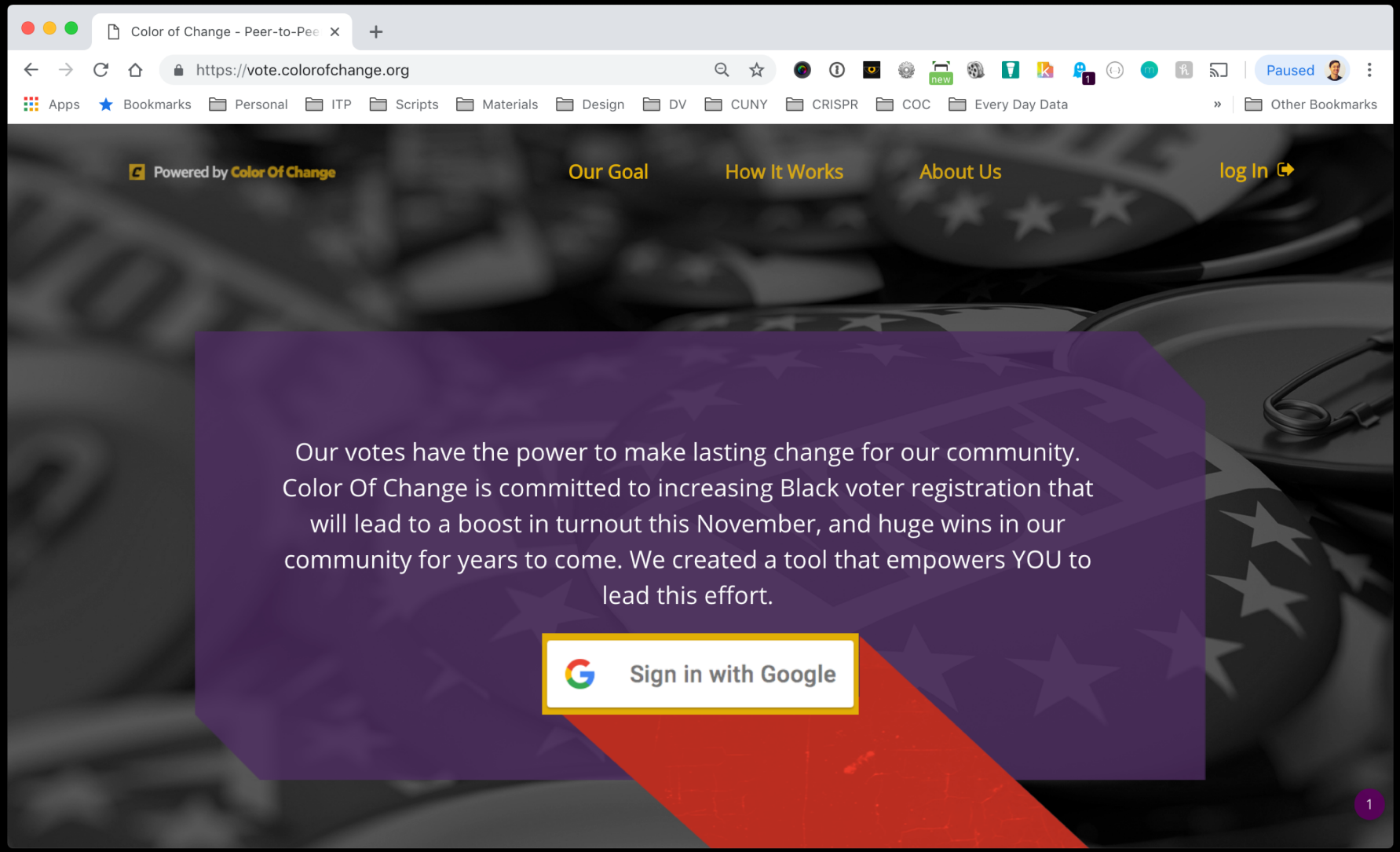


# Syfy App and Philips Hue API

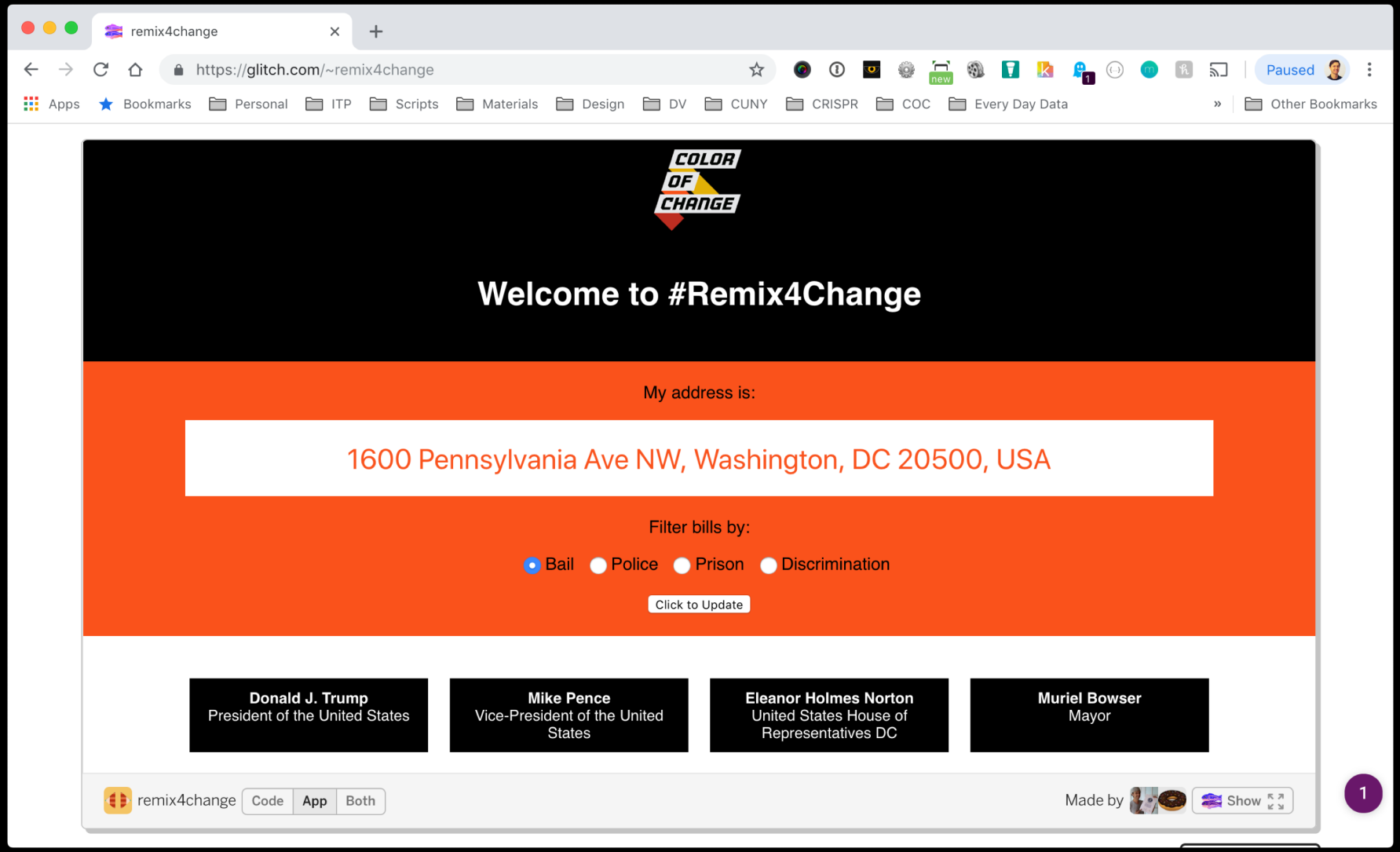
# Fashion Weather Ready



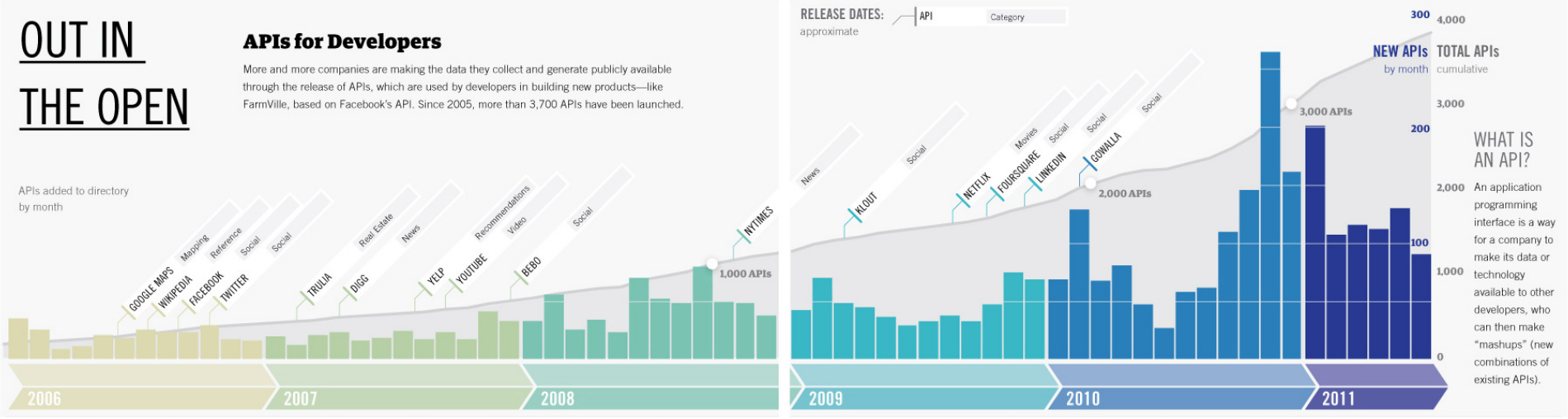
# vote.colorofchange.org



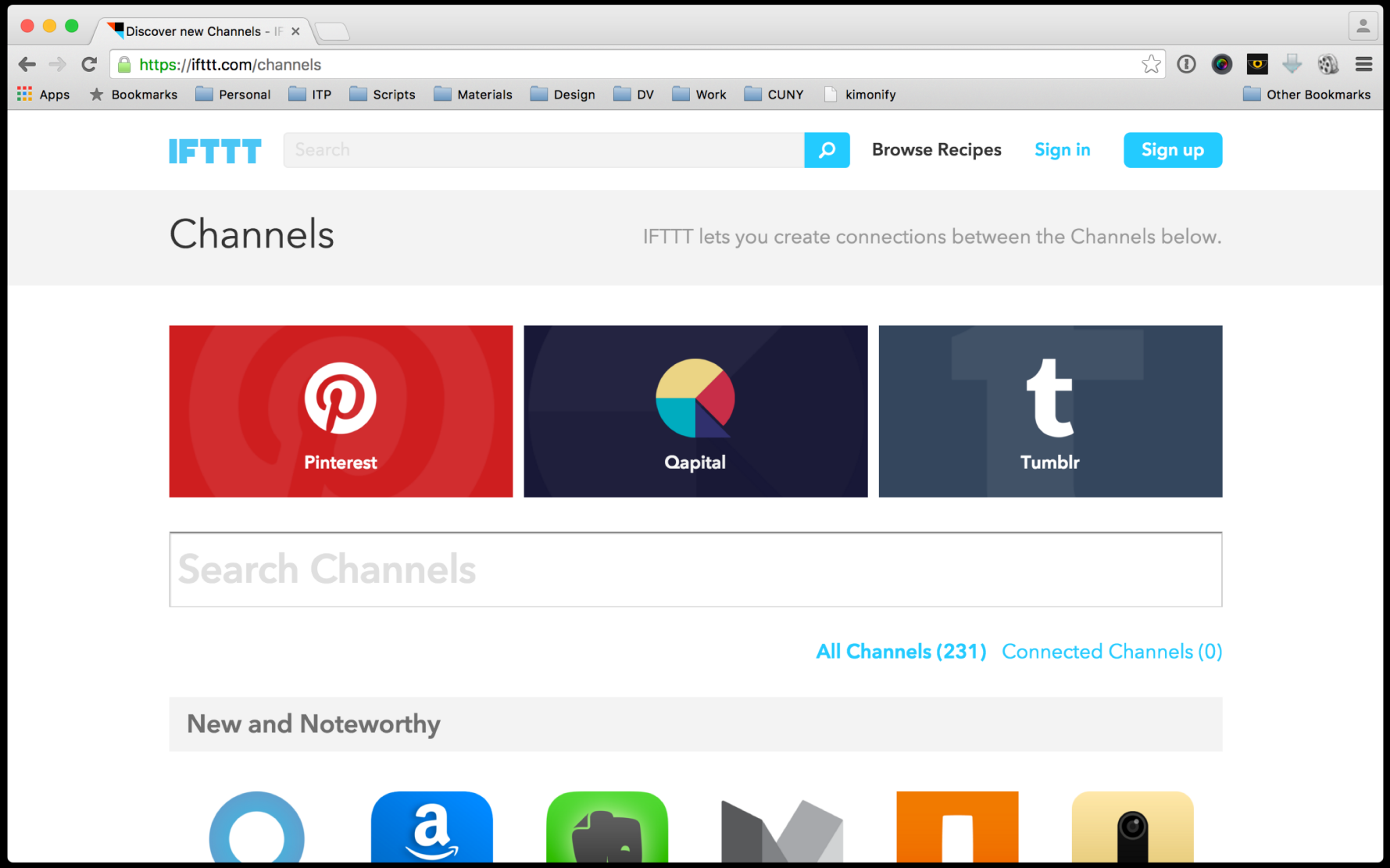
# Remix4Change



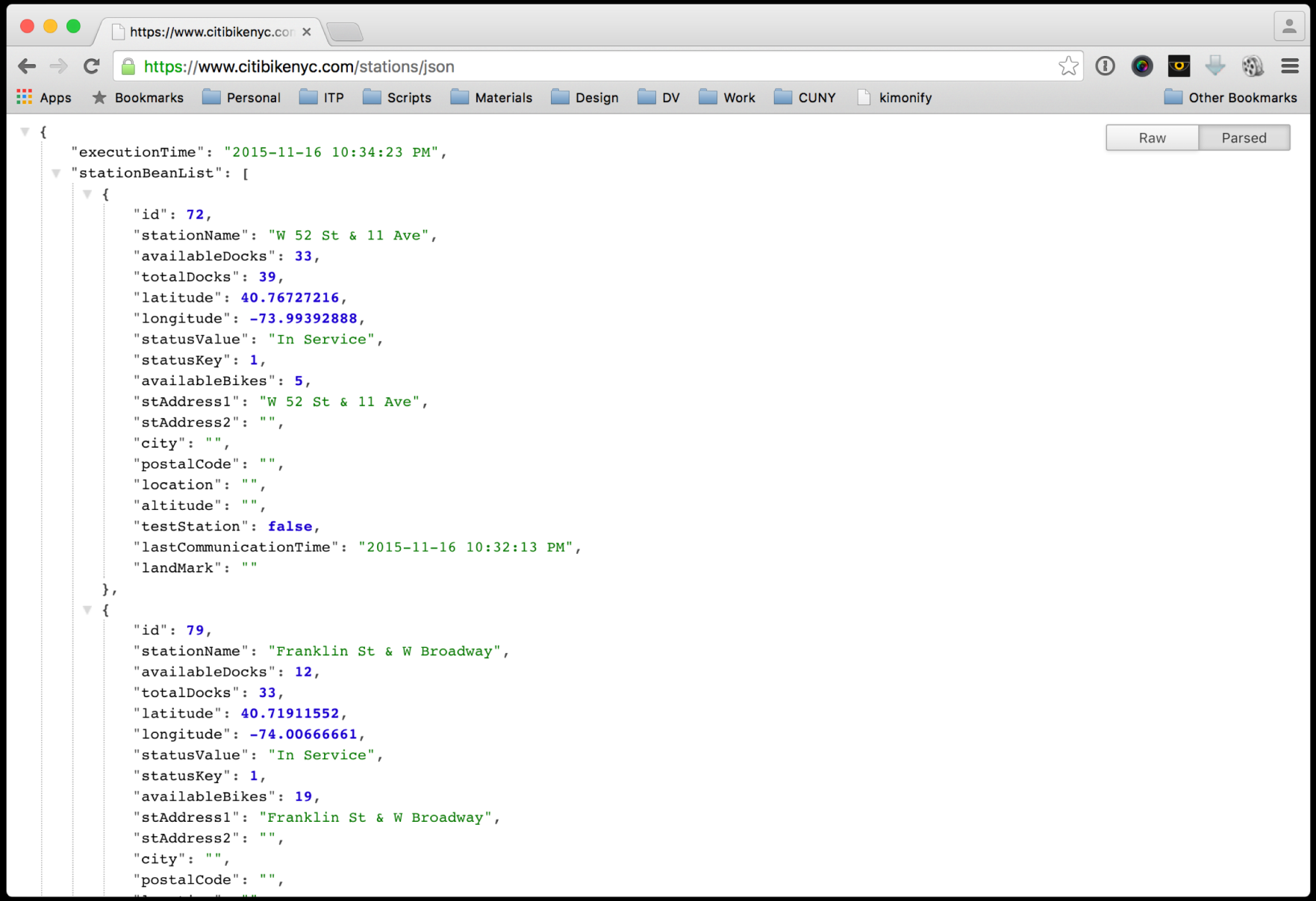
# API History


OUT IN THE OPEN
APIs for Developers
More and more companies are making the data they collect and generate publicly available through the release of APIs, which are used by developers in building new products—like FarmVille, based on Facebook's API. Since 2005, more than 3,700 APIs have been launched.
APIs added to directory by month
GOOGLE MAPS
WIKIPEDIA
FACEBOOK
TWITTER
TRULIA
DIGG
YELP
YOUTUBE
BEBO
NYTIMES
1,000 APIs
2006
2007
2008
RELEASE DATES:
approximate
API
Category
KLOUT
NETFLIX
FOURSQUARE
LINKEDIN
GOWALLA
2,000 APIs
3,000 APIs
NEW APIs
by month
TOTAL APIs
cumulative
WHAT IS AN API?
An application programming interface is a way for a company to make its data or technology available to other developers, who can then make "mashups" (new combinations of existing APIs).
2009
2010
2011

# IFTTT


Discover new Channels - IF
https://ifttt.com/channels
Apps
Bookmarks
Personal
ITP
Scripts
Materials
Design
DV
Work
CUNY
kimonify
Other Bookmarks
IFTTT
Search
Browse Recipes
Sign in
Sign up
Channels
IFTTT lets you create connections between the Channels below.
Pinterest
Qapital
Tumblr
Search Channels
All Channels (231)
Connected Channels (0)
New and Noteworthy

# JSON Object Data Format



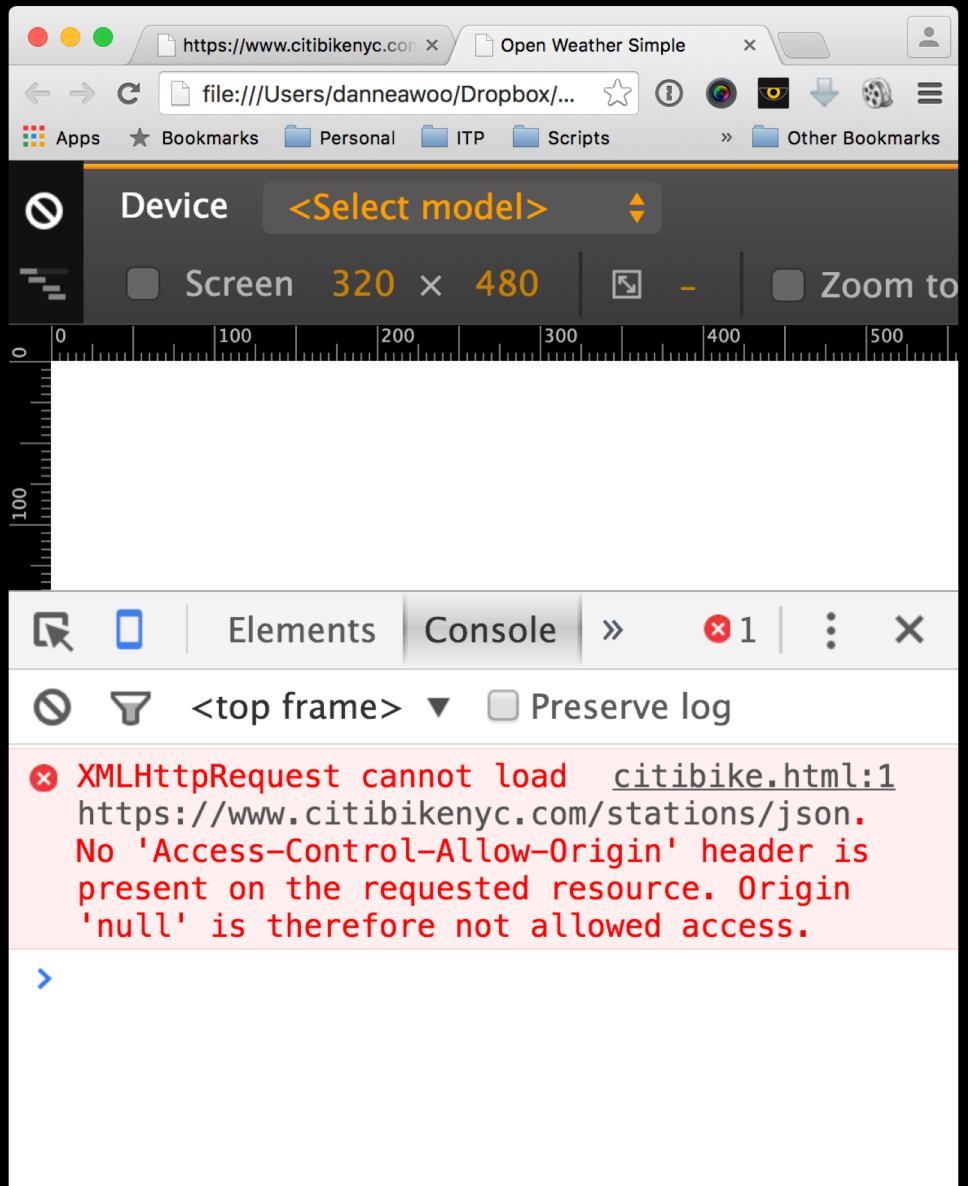
## jQuery ajax

```
$.ajax({
        url: "http://www.apiwebsite.com",
        type: "get",
        dataType: "jsonp",
        data: data that is sent to the server,
        success: function(data) {
                // Do something with the data.
                console.log(data);
        },
        error: function(data) {
                // Error message displays here.
                console.log(data);
        }
});
```

## jQuery getJSON

```
$.getJSON( "http://www.apiwebsite.com", function(data) {
    // Do something with the data.
    console.log(data);
});
```

# JSON Error


https://www.citibikenyc.com
Open Weather Simple
file:///Users/danneawoo/Dropbox/...
Apps
Bookmarks
Personal
ITP
Scripts
Other Bookmarks
Device
<Select model>
Screen 320 × 480
Zoom to
Elements
Console
1
<top frame>
Preserve log
XMLHttpRequest cannot load https://www.citibikenyc.com/stations/json. No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin 'null' is therefore not allowed access.
citibike.html:1

# APIs

## In Class Assignment / Homework

Explore the world of APIs. Think of a website or topic that you are interested in and try and find an open API where you can pull that data into your own website.

Start to think about what you want to build for your final project. This can be an interactive version of your midterm, a website around your personal data or a creative way to use data from APIs.