

APIs



@krob
@mediocrity

Intros, agenda

Presentation

Why APIs are awesome

Twitter APIs (mechanics, examples, docs)

Trust issues

Group research and share back

Build!

Questions!

:)

Introduction to Twitter API. Who uses this? Why is it awesome? How is it changing the world?

10min

Embedded timeline in web

<https://blog.twitter.com/2014/3-power-tips-for-using-embedded-timelines>

REST API

When your followers joined Twitter

from <https://blog.twitter.com/2014/visualizing-your-twitter-conversations>

Streaming API

Count:

<https://github.com/romainhuet/twitter-platform-demos/blob/master/streaming/count.html>

With geolocation:

<https://github.com/romainhuet/twitter-platform-demos/blob/master/streaming/geolocation.html>

with Google Maps API too!

Taking action!

<https://github.com/jlamere/favbot>

```
# create Api instance
auth = tweepy.OAuthHandler(consumer_key, consumer_secret)
auth.set_access_token(oauth_token, oauth_token_secret)
api = tweepy.API(auth)

def search_tweets():
    return api.user_timeline(count=20, screen_name = "tkloumo", trim_user=True, include_rts=False)

def fav_tweet(tweet):
    try:
        api.create_favorite(tweet.id)
        return
    except:
        return

def main():
    result = search_tweets()
    for tweet in result:
        fav_tweet(tweet)
```

Other examples

Twitter:

<http://visibletweets.com/#query=gwcboston&animation=1>

<http://mentionmapp.com/>

<http://trendsmap.com/>

Other sites:

<http://wheelof.com/lunch/?zip=02144&query=lunch&radius=4>

<http://yasiv.com>

<http://www.dipity.com/mashups/timetube/#timeline>

<http://jlamere.github.io/jbiebs/>

Bookwormasaurus

NY times + Twitter

Other examples

how-many-hashtags

match-the-tweet

race!

Walk students through 3 examples of the API, including how to get started using it. These examples don't have to be complete, and can include starter code for the students. The intention is for students to become comfortable using the API.

40min

APIs

Why APIs are awesome

Decoupling

Across language, platform, whatever

Open for creativity!

APIs

Phone to server

Poke at it with Charles

<http://www.charlesproxy.com/>

APIs

Website to server

Poke at it with web inspector

<https://www.codeschool.com/courses/discover-devtools>

APIs

Server to Server



Camiloivers @camiloantonioiv · 2m

Vamos @CBF_Futebol! #Copa2014 Para quem você está torcendo?

twitter.com/lt/worldcup



Translated from Portuguese by  bing

Come On @CBF_Futebol! #Copa2014 Who are you rooting for? twitter.com/lt/worldcup

[Collapse](#)

 Reply  Retweet  Favorite ... More

6:42 AM - 13 Jun 2014 - [Details](#)

APIs

Embedded in web browser

[http://www.yelp.com/search?
find_desc=pizza&find_loc=Boston%
2C+MA&ns=1](http://www.yelp.com/search?find_desc=pizza&find_loc=Boston%2C+MA&ns=1)

APIs

Inside a program, e.g., [indexOf](#)

Syntax

```
str.indexOf(searchValue[, fromIndex])
```

Parameters

searchValue

A string representing the value to search for.

fromIndex

The location within the calling string to start the search from. It can be any integer. The default value is 0. If `fromIndex < 0` the entire string is searched (same as passing 0). If `fromIndex >= str.length`, the method will return -1 unless `searchValue` is an empty string in which case `str.length` is returned.

APIs

Public APIs for websites and apps

Best way to make something awesome fast!

Twitter API mechanics

Twitter API

Setup developer accounts

Create app

UI for permissions

API keys

Create access tokens

Twitter API



REST API



Streaming API

Trust

Hacking only!

Critical for production applications

SSL, HTTPS

OAuth, etc.

Rate limit

Trust

Type in movie name, is it being talked about on Twitter?

Personalization.

Just ask for username and password?

Examples!

Example code

Web, with node.js server with twit module

Taking keys and tokens and using them

`how-many-hashtags.html`

`race.html`

Bookwormosaurus

Cordova with oauth.io

App auth with NYTimes

User auth with Twitter

Docs

Search as an example

<https://dev.twitter.com/docs/api/1.1/get/search/tweets>

Parameters

GET/PUT, HTTP

Client libraries (e.g., tweepy, twit, oauth.io)

Break students into groups of 3-5 students and each research 1 facet of the API (e.g. one group researches all string manipulation methods) via online documentation and implement an example. Students will present their findings in 4-5 minute presentations to the class.

40min

Research

Research to hack! Or for curiosity.

Build off examples if you can.

Choose one topic

Share back what you learned, just a few sentences

Questions!

Licensing

App Store logistics

Anything! :)

Research ideas

Ideas for hacking projects:

- Tweet spell checker
- Profile picture or background picture mosaic

Twitter REST API: <https://dev.twitter.com/docs/api/1.1>

Twitter Streaming API: <https://dev.twitter.com/docs/streaming-apis>

Details of how Twitter app-level auth or user-level auth works: <https://dev.twitter.com/docs/auth/application-only-auth>

OAuth in general: <http://hueniverse.com/oauth/guide/intro/>

Other services with public APIs (goodreads, nytimes)

Reorganize groups and ask students to build a simple application using what they have learned. This needs to be completable within 1 hour -- please take this into account when determining the assignment. Students have been coding for 4 - 5 weeks, and are capable of moderately difficult tasks

60min

Iterative!

An hour until demos

Take a small step

Demo how far you got!

Thanks!



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