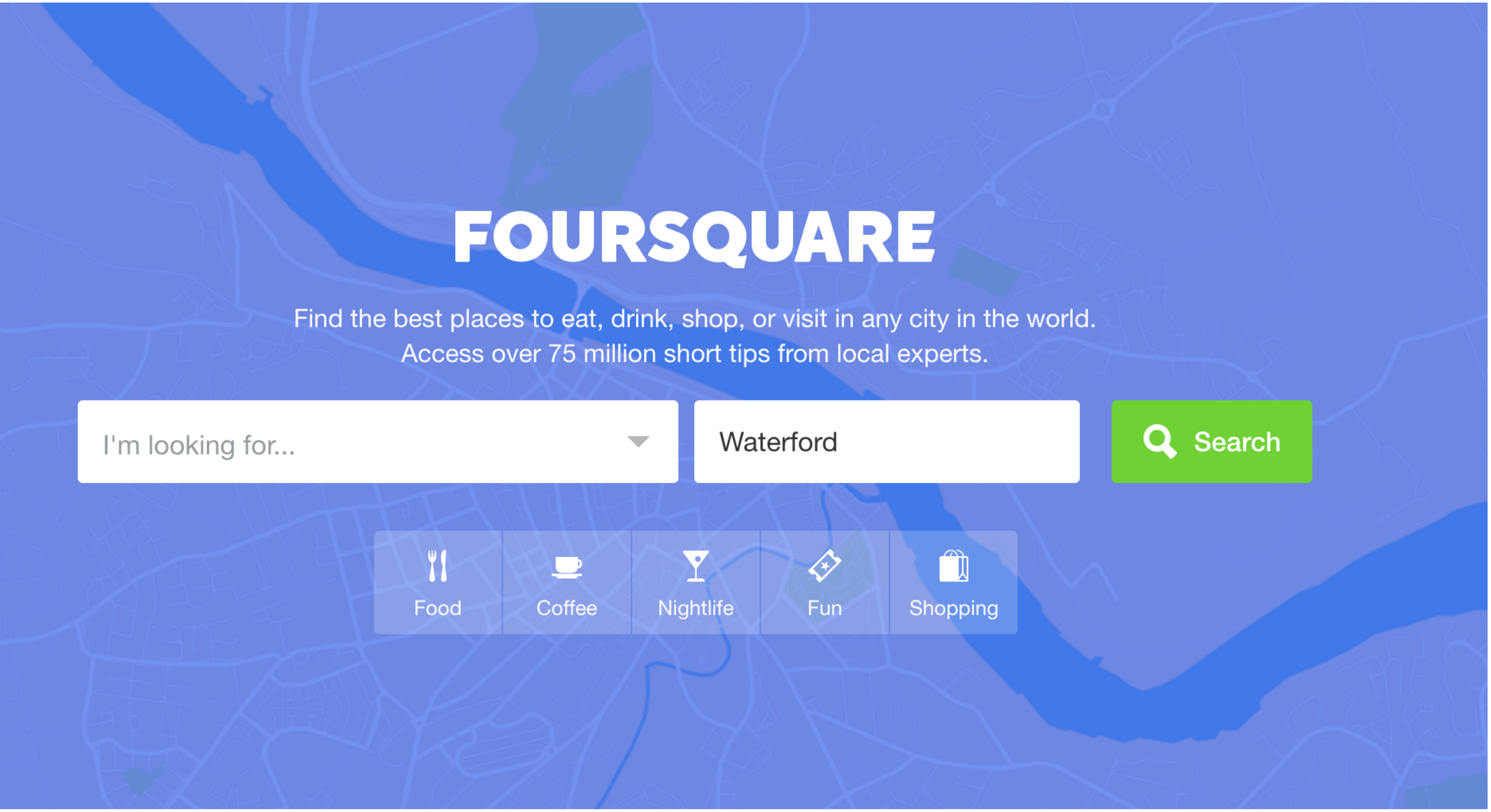
Ajax 2: FourSquare API in Node

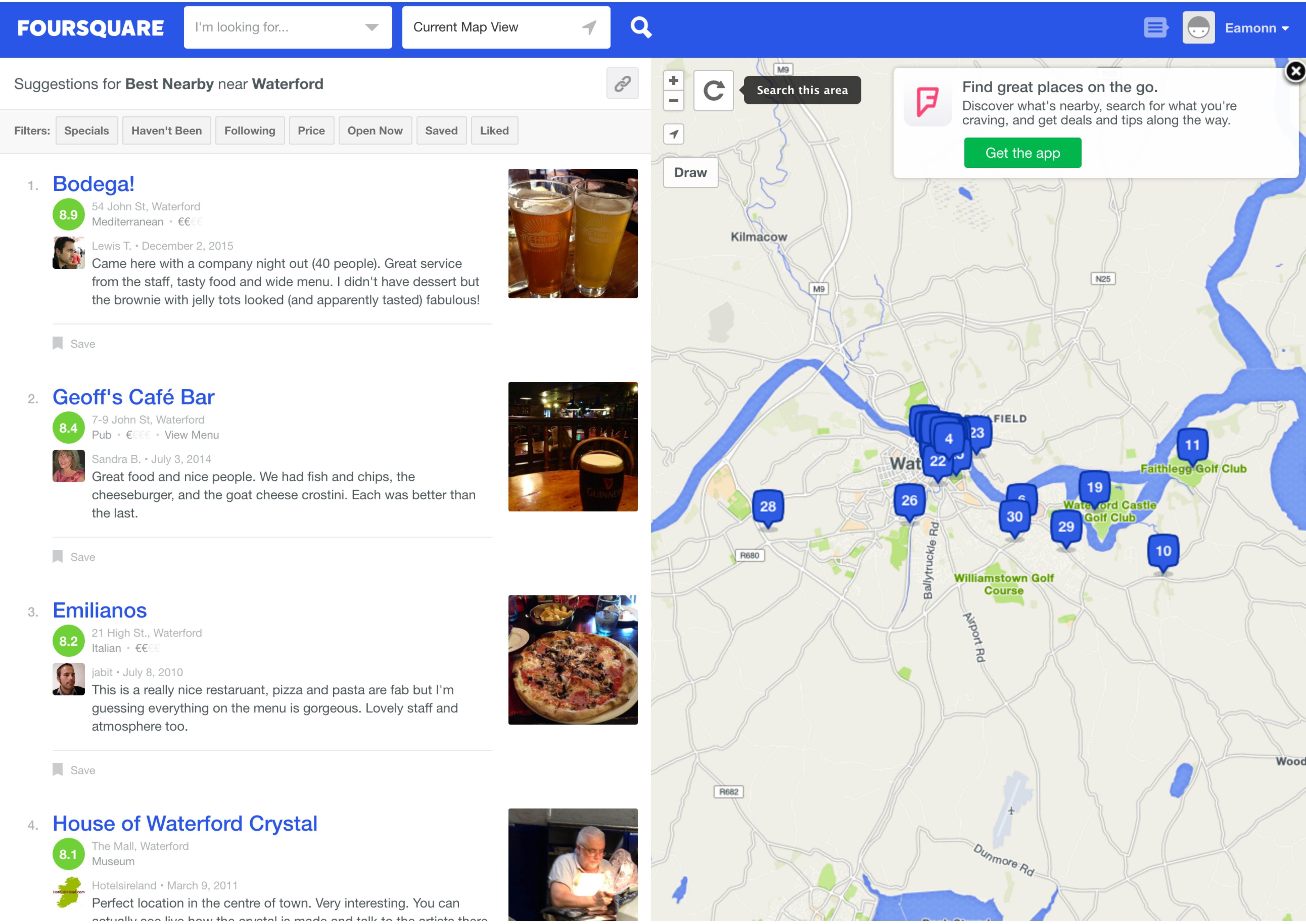
Agenda

- Foursquare Sevice
- FourSquare Developer
- Checkin API
- Insomnia REST Client
- Node.js program to access API, and retrieve checkin lists for a location



FOURSQUARE

Find the best places to eat, drink, shop, or visit in any city in the world.
Access over 75 million short tips from local experts.



Suggestions for **Best Nearby** near **Waterford**

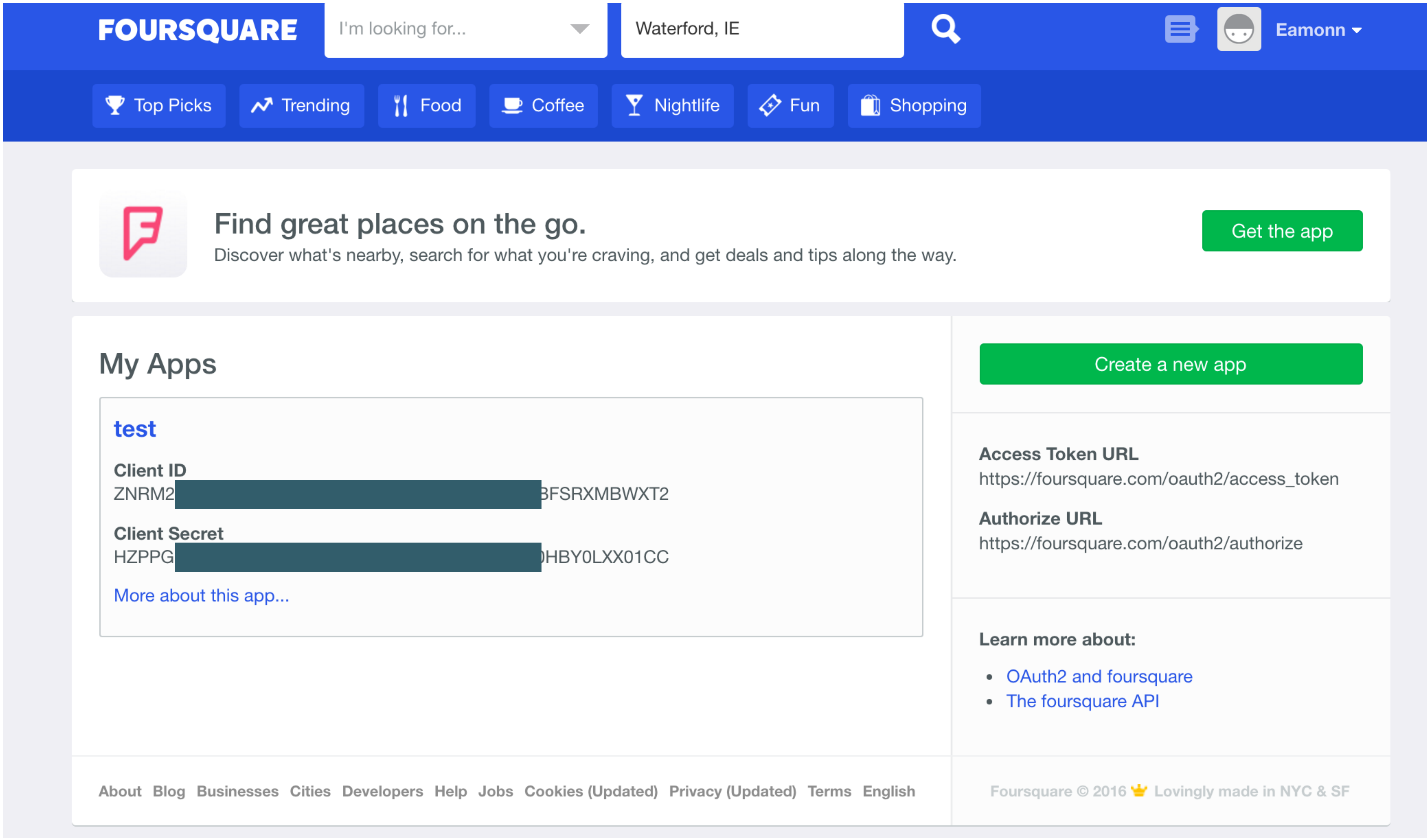
Find great places on the go.
Discover what's nearby, search for what you're craving, and get deals and tips along the way.

1. **Bodega!**
8.9 54 John St, Waterford
Mediterranean · €€€€
Lewis T. • December 2, 2015
Came here with a company night out (40 people). Great service from the staff, tasty food and wide menu. I didn't have dessert but the brownie with jelly tots looked (and apparently tasted) fabulous!

2. **Geoff's Café Bar**
8.4 7-9 John St, Waterford
Pub · €€€€ · View Menu
Sandra B. • July 3, 2014
Great food and nice people. We had fish and chips, the cheeseburger, and the goat cheese crostini. Each was better than the last.

3. **Emilianos**
8.2 21 High St., Waterford
Italian · €€€€
jabit • July 8, 2010
This is a really nice restaurant, pizza and pasta are fab but I'm guessing everything on the menu is gorgeous. Lovely staff and atmosphere too.

4. **House of Waterford Crystal**
8.1 The Mall, Waterford
Museum
Hotelsireland • March 9, 2011
Perfect location in the centre of town. Very interesting. You can actually see live how the crystal is made and talk to the artists there



Find great places on the go.

Discover what's nearby, search for what you're craving, and get deals and tips along the way.

My Apps

test

Client ID
ZNRM2[redacted]BFSRXMBWXT2

Client Secret
HZPPG[redacted]HBY0LXX01CC

More about this app...

Access Token URL
https://foursquare.com/oauth2/access_token

Authorize URL
https://foursquare.com/oauth2/authorize

Learn more about:

- OAuth2 and foursquare
- The foursquare API

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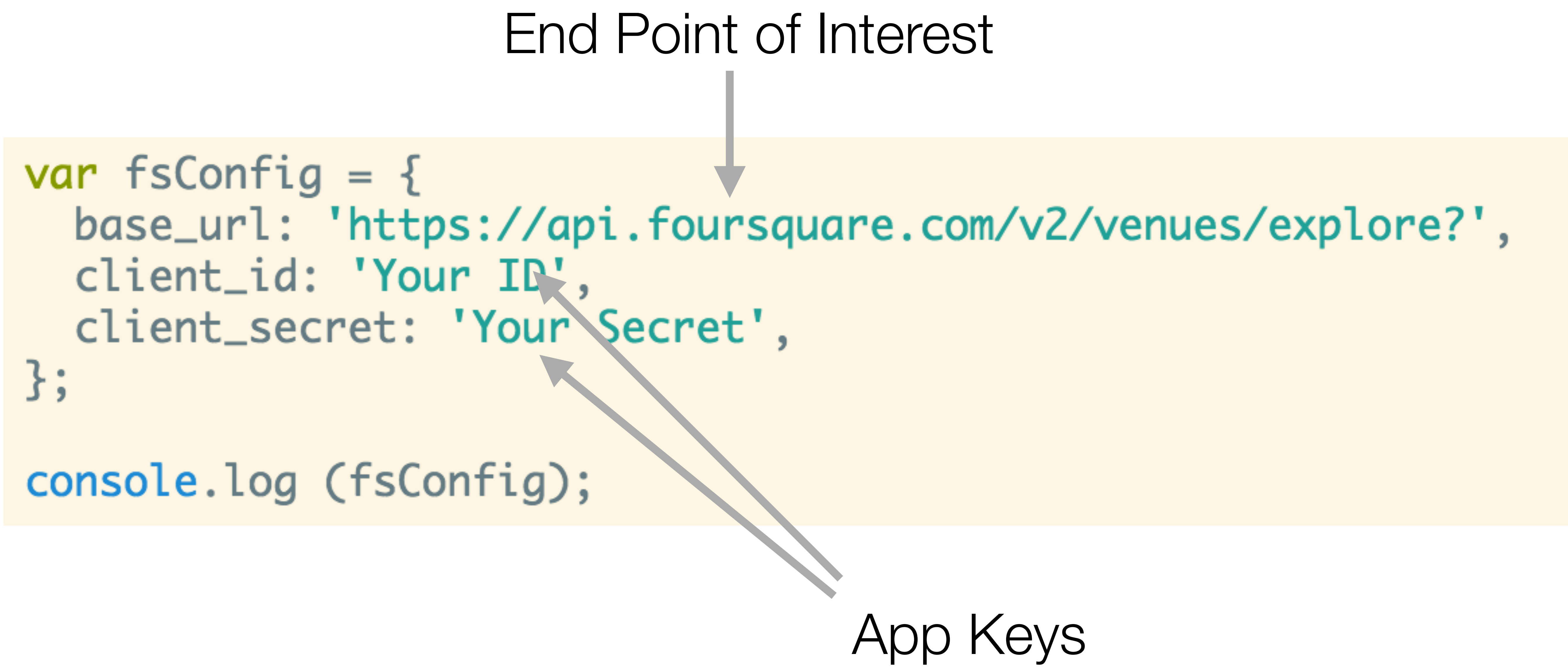
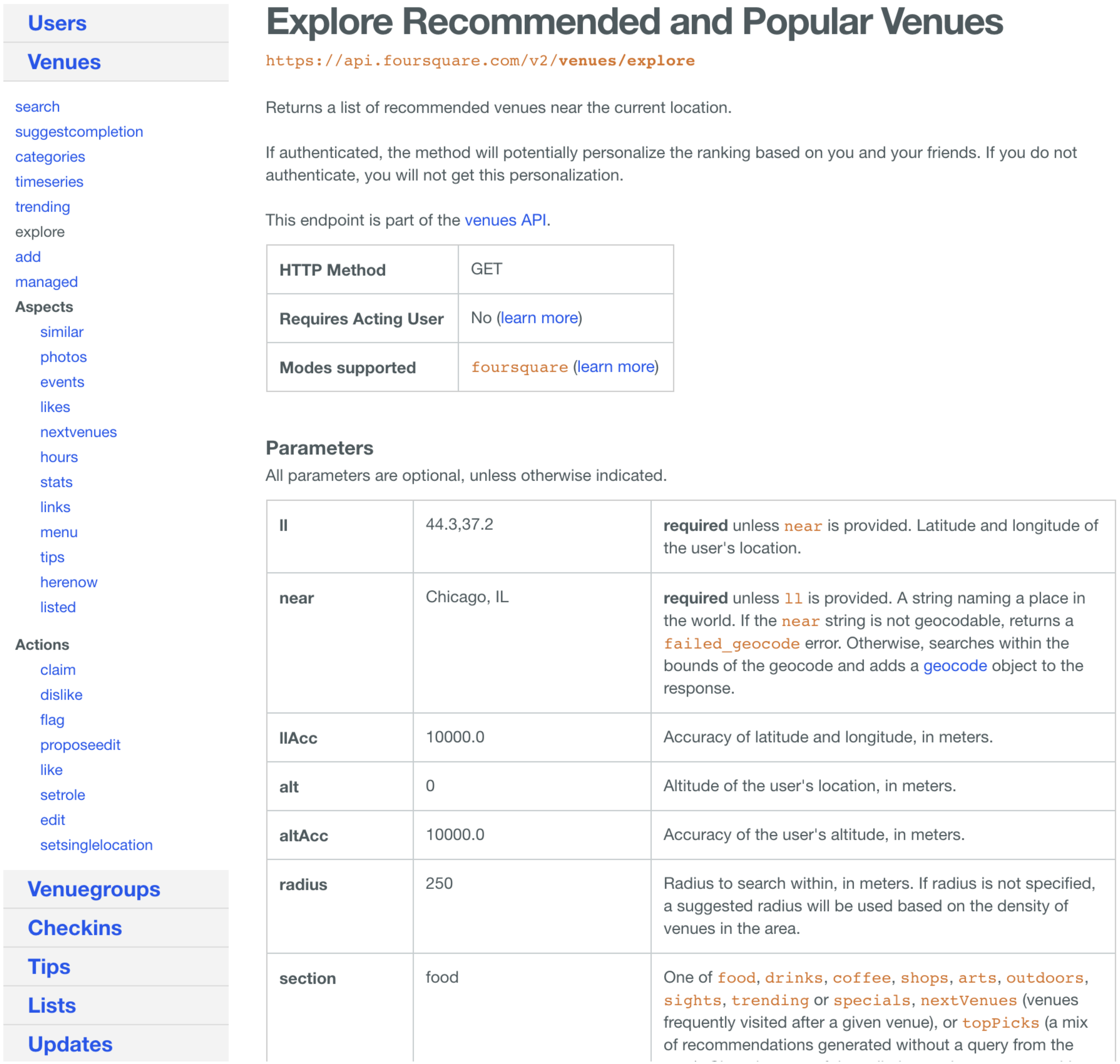
Credentials in Javascript



```
var fsConfig = {
  base_url: 'https://api.foursquare.com/v2/venues/explore?',
  client_id: 'Your ID',
  client_secret: 'Your Secret',
};

console.log (fsConfig);
```

API Documentation



Users

Venues

- search
- suggestcompletion
- categories
- timeseries
- trending
- explore
- add
- managed
- **Aspects**
  - similar
  - photos
  - events
  - likes
  - nextvenues
  - hours
  - stats
  - links
  - menu
  - tips
  - herenow
  - listed
- **Actions**
  - claim
  - dislike
  - flag
  - proposeedit
  - like
  - setrole
  - edit
  - setsinglelocation

Venuegroups

Checkins

Tips

Lists

Updates

Explore Recommended and Popular Venues

`https://api.foursquare.com/v2/venues/explore`

Returns a list of recommended venues near the current location.

If authenticated, the method will potentially personalize the ranking based on you and your friends. If you do not authenticate, you will not get this personalization.

This endpoint is part of the venues API.

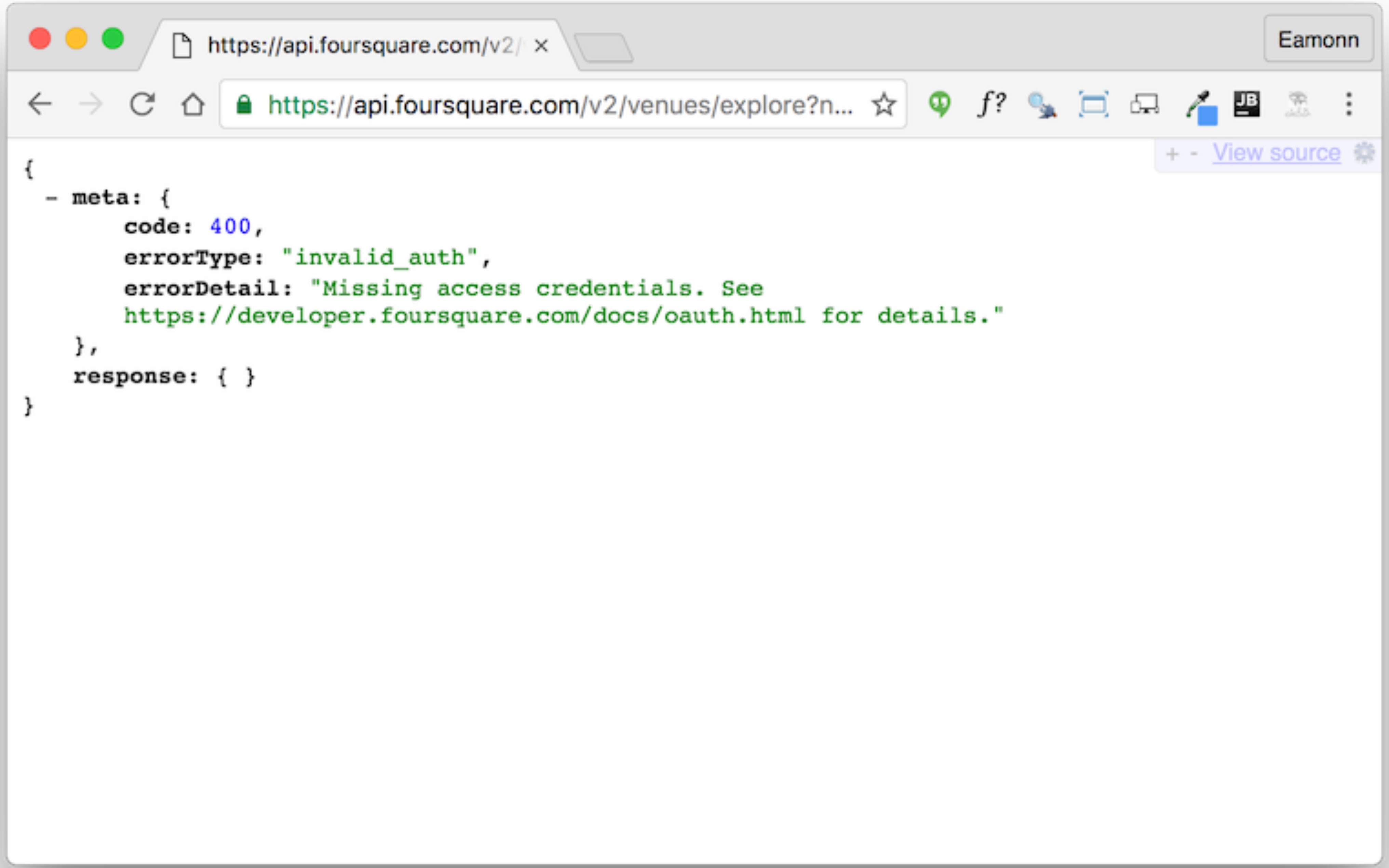
HTTP Method	GET
Requires Acting User	No (learn more)
Modes supported	`foursquare` (learn more)

Parameters

All parameters are optional, unless otherwise indicated.

ll	44.3,37.2	**required** unless `near` is provided. Latitude and longitude of the user's location.
near	Chicago, IL	**required** unless `ll` is provided. A string naming a place in the world. If the `near` string is not geocodable, returns a `failed_geocode` error. Otherwise, searches within the bounds of the geocode and adds a geocode object to the response.
llAcc	10000.0	Accuracy of latitude and longitude, in meters.
alt	0	Altitude of the user's location, in meters.
altAcc	10000.0	Accuracy of the user's altitude, in meters.
radius	250	Radius to search within, in meters. If radius is not specified, a suggested radius will be used based on the density of venues in the area.
section	food	One of `food`, `drinks`, `coffee`, `shops`, `arts`, `outdoors`, `sights`, `trending` or `specials`, `nextVenues` (venues frequently visited after a given venue), or `topPicks` (a mix of recommendations generated without a query from the

`https://api.foursquare.com/v2/venues/explore?near=Waterford,IE&query=&v=20140601`

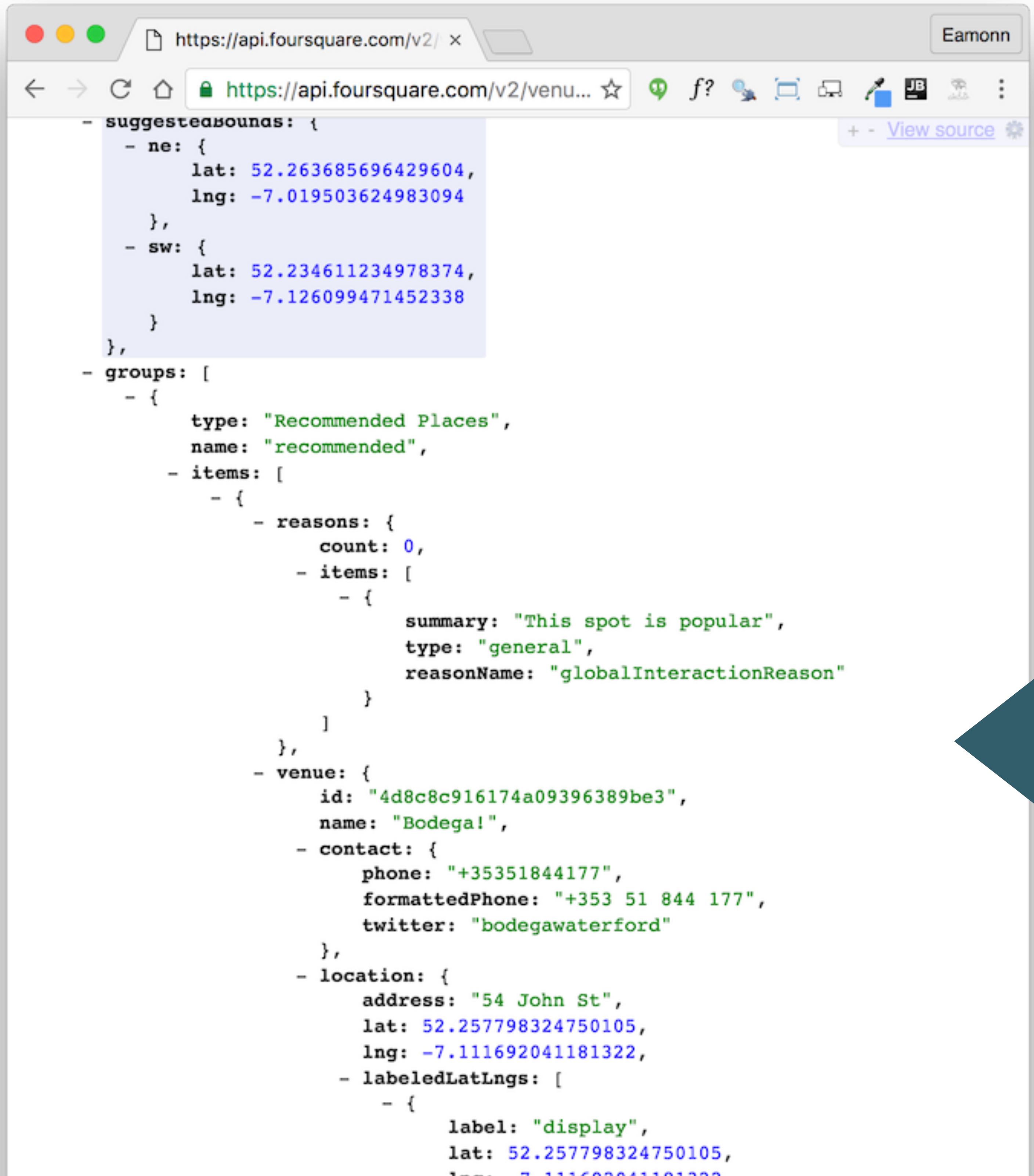

https://api.foursquare.com/v2/
Eamonn
https://api.foursquare.com/v2/venues/explore?n...
+ - View source

```
{
  - meta: {
        code: 400,
        errorType: "invalid_auth",
        errorDetail: "Missing access credentials. See
        https://developer.foursquare.com/docs/oauth.html for details."
    },
    response: { }
}
```

GET Request

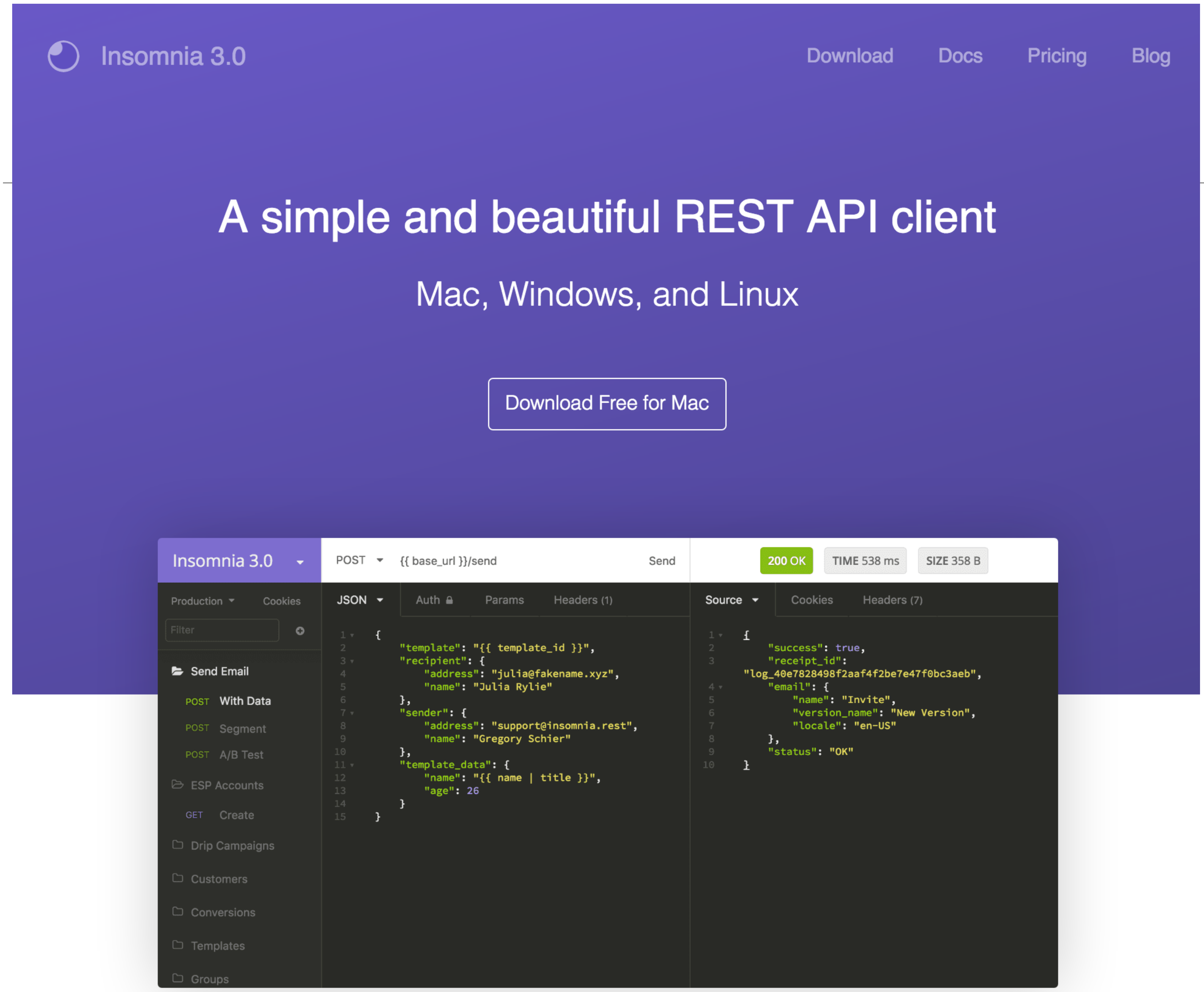
```
https://api.foursquare.com/v2/venues/explore?near=Waterford,IE&query=&client_id=YOUR_ID&client_secret=YOUR_SECRET&v=201
```

Your Credentials


https://api.foursquare.com/v2/
Eamonn
https://api.foursquare.com/v2/venu...
View source

```
- suggestedBounds: {
    - ne: {
          lat: 52.263685696429604,
          lng: -7.019503624983094
      },
    - sw: {
          lat: 52.234611234978374,
          lng: -7.126099471452338
      }
  },
- groups: [
    - {
          type: "Recommended Places",
          name: "recommended",
        - items: [
            - {
                - reasons: {
                      count: 0,
                    - items: [
                        - {
                              summary: "This spot is popular",
                              type: "general",
                              reasonName: "globalInteractionReason"
                          }
                      ]
                  },
                - venue: {
                      id: "4d8c8c916174a09396389be3",
                      name: "Bodega!",
                    - contact: {
                          phone: "+35351844177",
                          formattedPhone: "+353 51 844 177",
                          twitter: "bodegawaterford"
                      },
                    - location: {
                          address: "54 John St",
                          lat: 52.257798324750105,
                          lng: -7.111692041181322,
                        - labeledLatLngs: [
                            - {
                                  label: "display",
                                  lat: 52.257798324750105,
```

JSON response

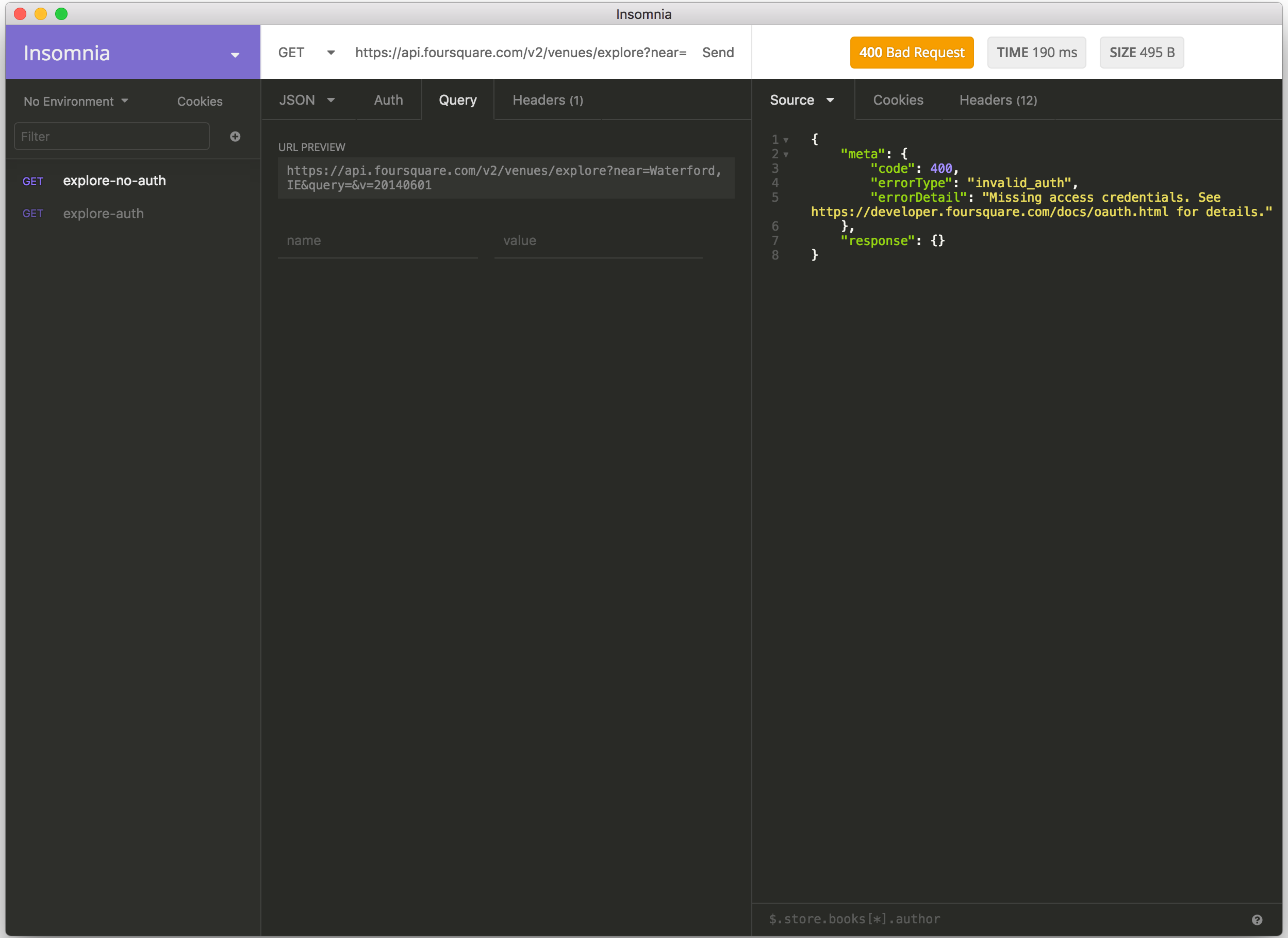


A simple and beautiful REST API client

Mac, Windows, and Linux

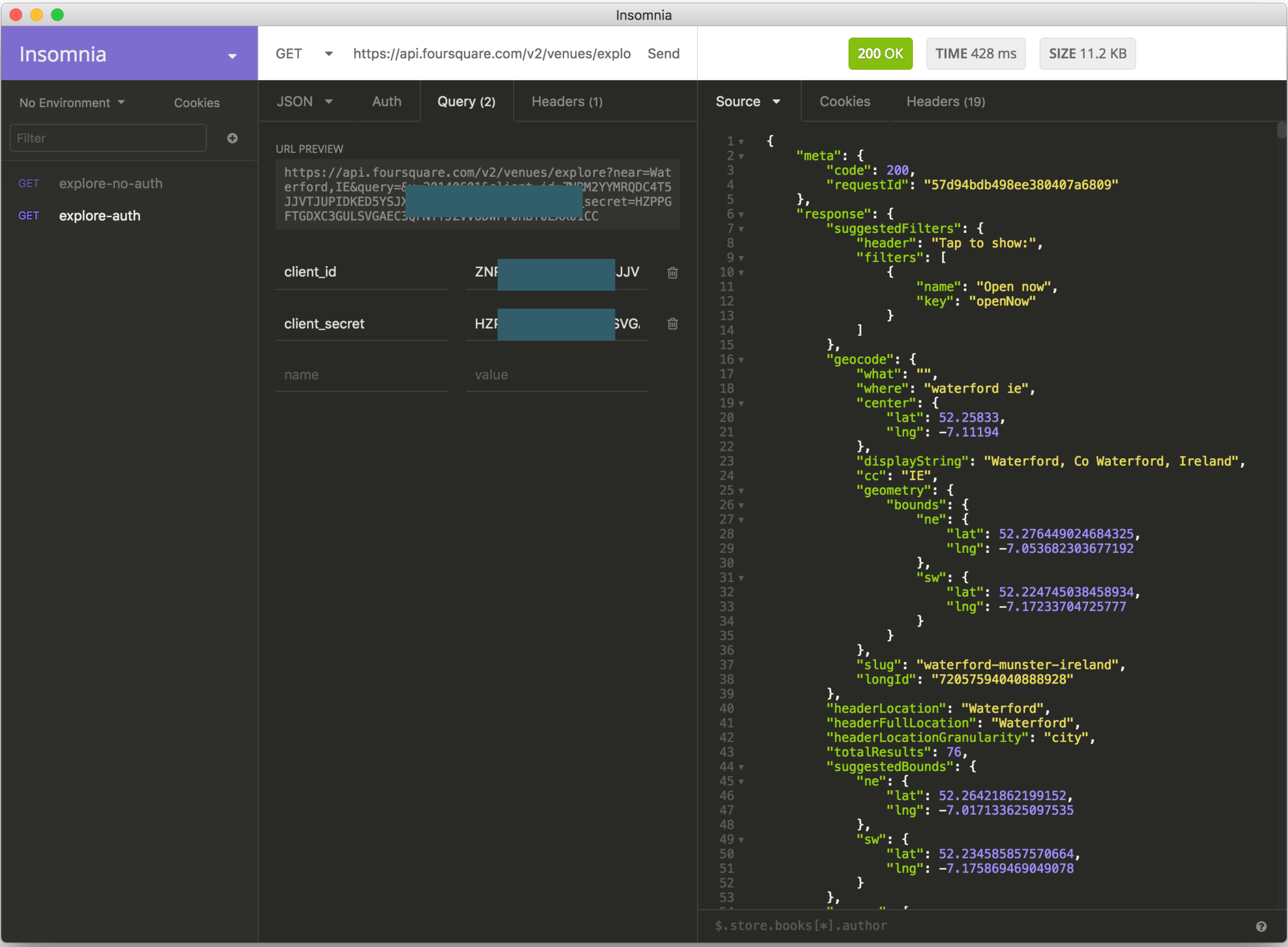
```
{
    "template": "{{ template_id }}",
    "recipient": {
        "address": "julia@fakename.xyz",
        "name": "Julia Rylie"
    },
    "sender": {
        "address": "support@insomnia.rest",
        "name": "Gregory Schier"
    },
    "template_data": {
        "name": "{{ name | title }}",
        "age": 26
    }
}
```

```
{
    "success": true,
    "receipt_id":
"log_40e7828498f2aaf4f2be7e47f0bc3aeb",
    "email": {
        "name": "Invite",
        "version_name": "New Version",
        "locale": "en-US"
    },
    "status": "OK"
}
```



```
https://api.foursquare.com/v2/venues/explore?near=Waterford,
IE&query=&v=20140601
```

```
{
    "meta": {
        "code": 400,
        "errorType": "invalid_auth",
        "errorDetail": "Missing access credentials. See
https://developer.foursquare.com/docs/oauth.html for details."
    },
    "response": {}
}
```



Insomnia

GET explore-no-auth
GET explore-auth

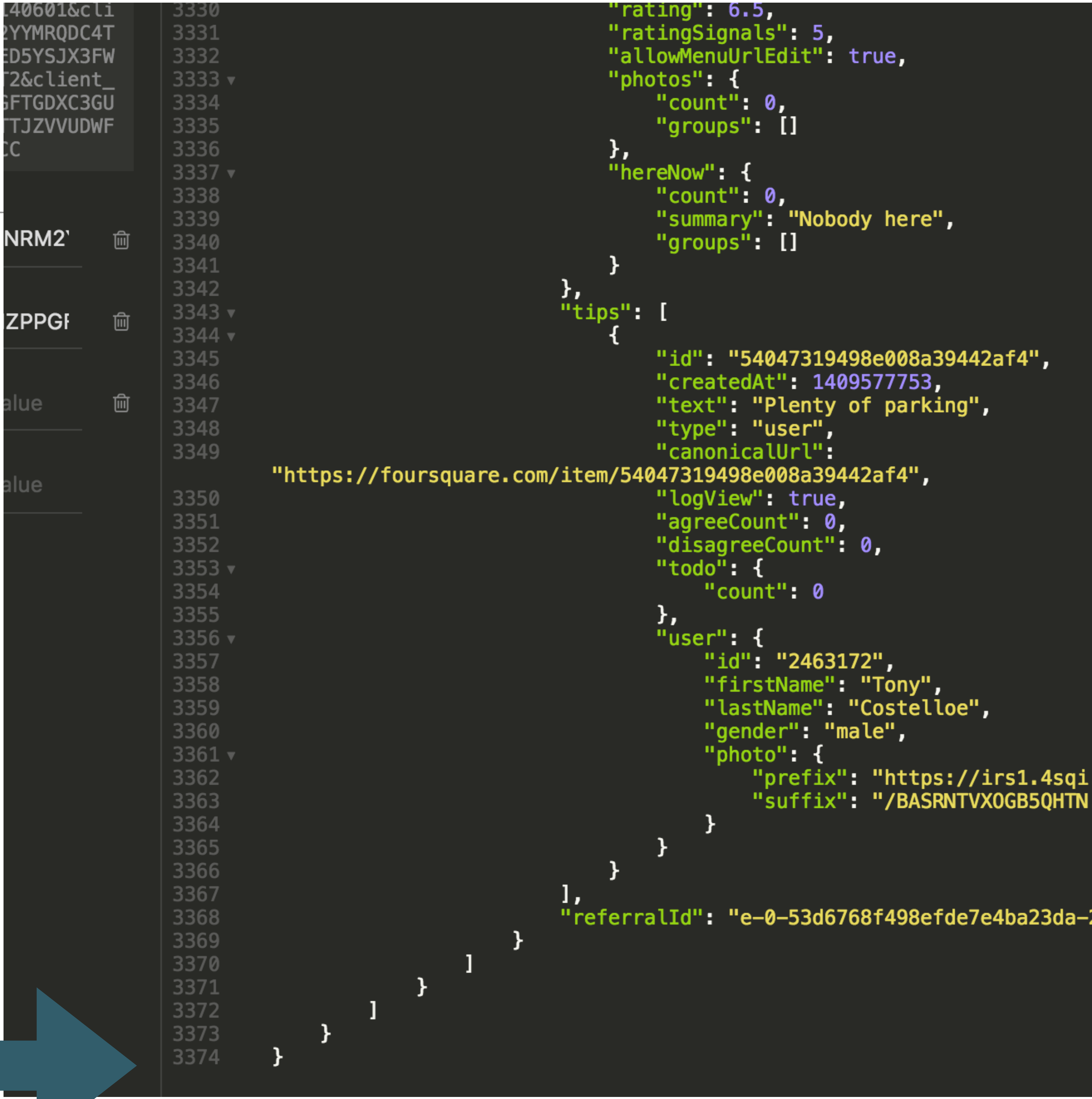
URL PREVIEW

```
https://api.foursquare.com/v2/venues/explore?near=Wat
erford,IE&query=&[redacted]secret=HZPPG
JJVTJUPIDKED5YSJX
FTGDXC3GULSVGAEC3
```

client_id	ZN[redacted]JJV
client_secret	HZ[redacted]SVG
name	value

```
{
    "meta": {
        "code": 200,
        "requestId": "57d94bdb498ee380407a6809"
    },
    "response": {
        "suggestedFilters": {
            "header": "Tap to show:",
            "filters": [
                {
                    "name": "Open now",
                    "key": "openNow"
                }
            ]
        },
        "geocode": {
            "what": "",
            "where": "waterford ie",
            "center": {
                "lat": 52.25833,
                "lng": -7.11194
            },
            "displayString": "Waterford, Co Waterford, Ireland",
            "cc": "IE",
            "geometry": {
                "bounds": {
                    "ne": {
                        "lat": 52.276449024684325,
                        "lng": -7.053682303677192
                    },
                    "sw": {
                        "lat": 52.224745038458934,
                        "lng": -7.17233704725777
                    }
                }
            },
            "slug": "waterford-munster-ireland",
            "longId": "72057594040888928"
        },
        "headerLocation": "Waterford",
        "headerFullLocation": "Waterford",
        "headerLocationGranularity": "city",
        "totalResults": 76,
        "suggestedBounds": {
            "ne": {
                "lat": 52.26421862199152,
                "lng": -7.017133625097535
            },
            "sw": {
                "lat": 52.234585857570664,
                "lng": -7.175869469049078
            }
        },
```

$.store.books[*].author



```
140601&cli
2YYMRQDC4T
ED5YSJX3FW
T2&client_
GFTGDXC3GU
TTJZVVUDWF
CC

NRM2

ZPPGI

alue

alue
```

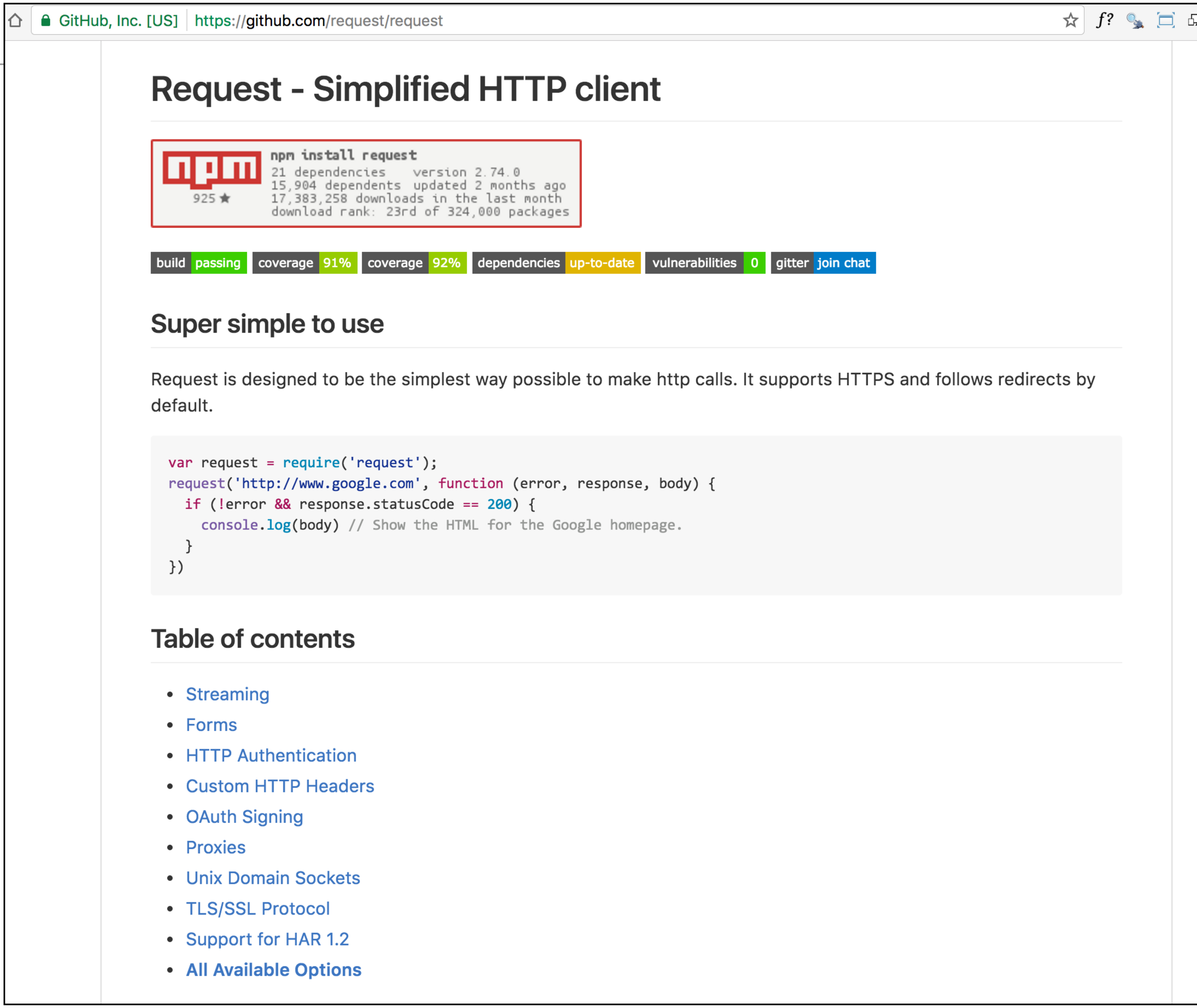
```
3330                                  "rating": 6.5,
3331                                  "ratingSignals": 5,
3332                                  "allowMenuUrlEdit": true,
3333                                  "photos": {
3334                                      "count": 0,
3335                                      "groups": []
3336                                  },
3337                                  "hereNow": {
3338                                      "count": 0,
3339                                      "summary": "Nobody here",
3340                                      "groups": []
3341                                  }
3342                              },
3343                              "tips": [
3344                                  {
3345                                      "id": "54047319498e008a39442af4",
3346                                      "createdAt": 1409577753,
3347                                      "text": "Plenty of parking",
3348                                      "type": "user",
3349                                      "canonicalUrl":
            "https://foursquare.com/item/54047319498e008a39442af4",
3350                                      "logView": true,
3351                                      "agreeCount": 0,
3352                                      "disagreeCount": 0,
3353                                      "todo": {
3354                                          "count": 0
3355                                      },
3356                                      "user": {
3357                                          "id": "2463172",
3358                                          "firstName": "Tony",
3359                                          "lastName": "Costelloe",
3360                                          "gender": "male",
3361                                          "photo": {
3362                                              "prefix": "https://irs1.4sqi
3363                                              "suffix": "/BASRNTVXOGB5QHTN
3364                                          }
3365                                      }
3366                                  }
3367                              ],
3368                              "referralId": "e-0-53d6768f498efde7e4ba23da-
3369                          }
3370                      ]
3371                  }
3372              ]
3373          }
3374      }
```

- 3,374 ‘Lines’ of JSON!

Api Programming

```
npm install request
```

- Node Module simplifying interacting with HTTP in JavaScript



GitHub, Inc. [US] https://github.com/request/request

Request - Simplified HTTP client

```
npm install request
21 dependencies    version 2.74.0
15,904 dependents  updated 2 months ago
17,383,258 downloads in the last month
download rank: 23rd of 324,000 packages
```

build passing | coverage 91% | coverage 92% | dependencies up-to-date | vulnerabilities 0 | gitter join chat

Super simple to use

Request is designed to be the simplest way possible to make http calls. It supports HTTPS and follows redirects by default.

```
var request = require('request');
request('http://www.google.com', function (error, response, body) {
  if (!error && response.statusCode == 200) {
    console.log(body) // Show the HTML for the Google homepage.
  }
})
```

Table of contents

Node Api Request

```
const request = require('request');
const fsConfig = require('./fs-config');

var fsCredentials = '&client_id=' + fsConfig.client_id     + '&client_secret='
                                  + fsConfig.client_secret + '&v=20140601';

function loadVenues(locationName, venueKeyword) {

  var requestOptions = {
    url: fsConfig.base_url + 'near=' + locationName + '&query=' + venueKeyword + fsCredentials,
    method: 'GET',
    json: {},
  };

  request(requestOptions, (err, response, body) => {

    const venues = body.response.groups[0].items;
    console.log(venues);

  });

}

var locationName = 'Waterford, IE';
loadVenues(locationName, '');
```

Callback invoked when response received

ES6 Arrow Functions

- An arrow function expression has a shorter syntax compared to function expressions.
- Arrow functions are always anonymous.

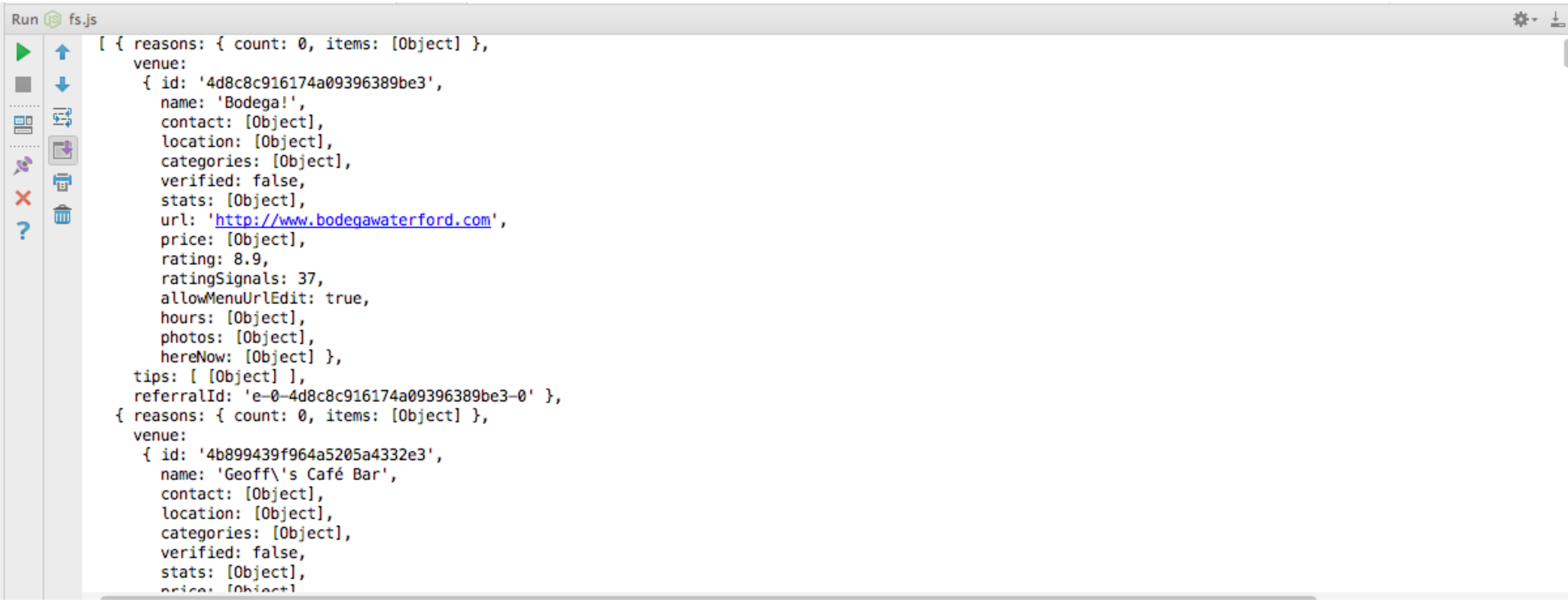
```
request(requestOptions, (err, response, body) => {

  const venues = body.response.groups[0].items;
  console.log(venues);

});
```

arrow function expression

```
request(requestOptions, function (err, response, body) {

  const venues = body.response.groups[0].items;
  console.log(venues);

});
```

function expression

```
request(requestOptions, (err, response, body) => {

  const venues = body.response.groups[0].items;
  console.log(venues);

});
```



Run fs.js

```
[ { reasons: { count: 0, items: [Object] },
    venue:
     { id: '4d8c8c916174a09396389be3',
       name: 'Bodega!',
       contact: [Object],
       location: [Object],
       categories: [Object],
       verified: false,
       stats: [Object],
       url: 'http://www.bodegawaterford.com',
       price: [Object],
       rating: 8.9,
       ratingSignals: 37,
       allowMenuUrlEdit: true,
       hours: [Object],
       photos: [Object],
       hereNow: [Object] },
    tips: [ [Object] ],
    referralId: 'e-0-4d8c8c916174a09396389be3-0' },
  { reasons: { count: 0, items: [Object] },
    venue:
     { id: '4b899439f964a5205a4332e3',
       name: 'Geoff\'s Café Bar',
       contact: [Object],
       location: [Object],
       categories: [Object],
       verified: false,
       stats: [Object],
request(requestOptions, (err, response, body) => {

  const venues = body.response.groups[0].items;
  console.log(venues);

});
```

```
request(requestOptions, (err, response, body) => {

  const venues = body.response.groups[0].items;
  const checkins = [];

  for (let venue of venues) {
    const checkin = {
      name: venue.venue.name,
      checkins: venue.venue.stats.checkinsCount,
      users: venue.venue.stats.usersCount,
    };
    checkins.push(checkin);
  }

  console.log(checkins);
});
```

Declare local array

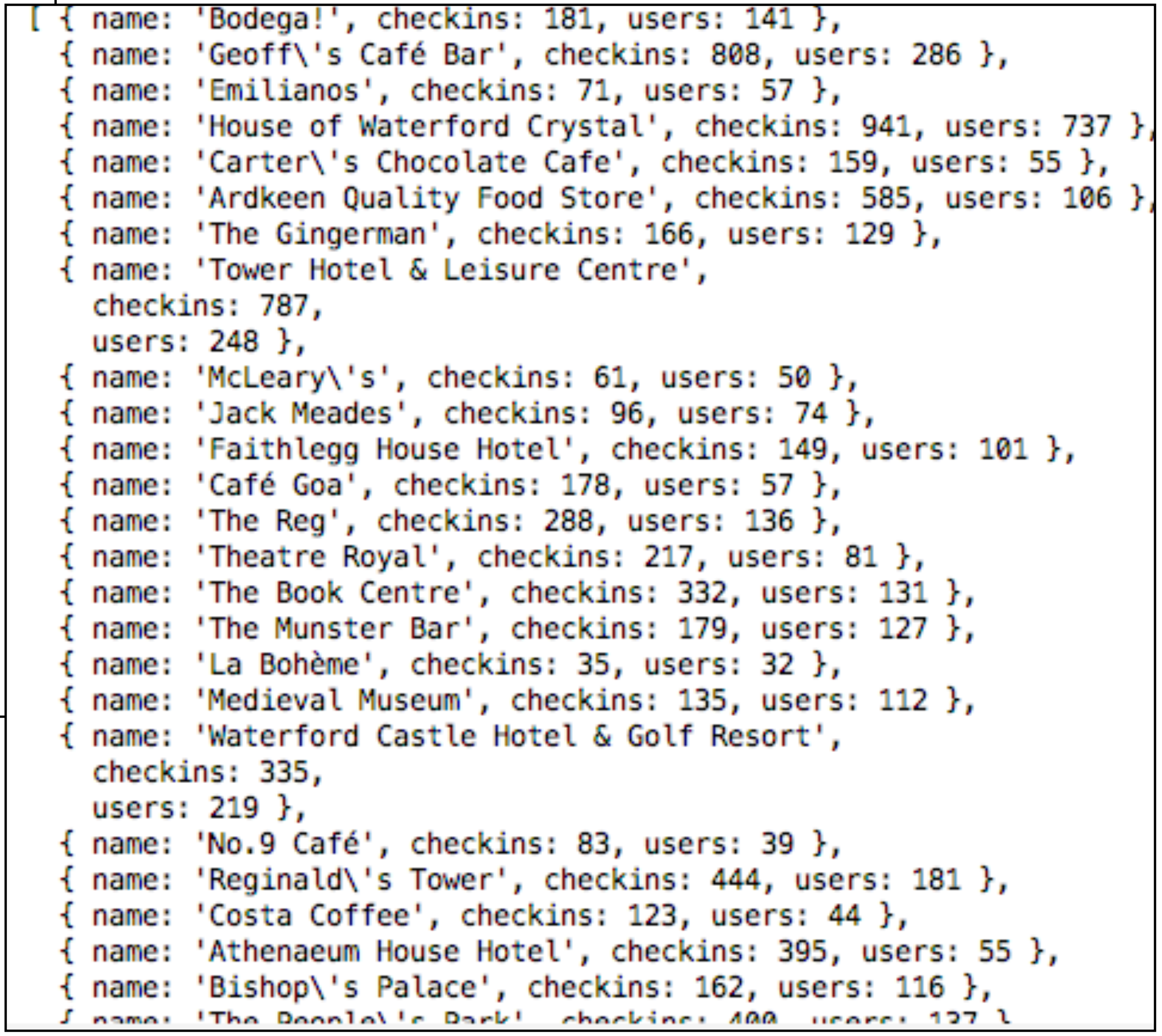
Loop through venues

create ‘checkin’ object

store in array

print array

```
request(requestOptions, (err, response, body) => {

  const venues = body.response.groups[0].items;
  const checkins = [];

  for (let venue of venues) {
    const checkin = {
      name: venue.venue.name,
      checkins: venue.venue.stats.checkinsCount,
      users: venue.venue.stats.usersCount,
    };
    checkins.push(checkin);
  }

  console.log(checkins);
});
```



```
[ { name: 'Bodega!', checkins: 181, users: 141 },
  { name: 'Geoff\'s Café Bar', checkins: 808, users: 286 },
  { name: 'Emilianos', checkins: 71, users: 57 },
  { name: 'House of Waterford Crystal', checkins: 941, users: 737 },
  { name: 'Carter\'s Chocolate Cafe', checkins: 159, users: 55 },
  { name: 'Ardkeen Quality Food Store', checkins: 585, users: 106 },
  { name: 'The Gingerman', checkins: 166, users: 129 },
  { name: 'Tower Hotel & Leisure Centre',
    checkins: 787,
    users: 248 },
  { name: 'McLeary\'s', checkins: 61, users: 50 },
  { name: 'Jack Meades', checkins: 96, users: 74 },
  { name: 'Faithlegg House Hotel', checkins: 149, users: 101 },
  { name: 'Café Goa', checkins: 178, users: 57 },
  { name: 'The Reg', checkins: 288, users: 136 },
  { name: 'Theatre Royal', checkins: 217, users: 81 },
  { name: 'The Book Centre', checkins: 332, users: 131 },
  { name: 'The Munster Bar', checkins: 179, users: 127 },
  { name: 'La Bohème', checkins: 35, users: 32 },
  { name: 'Medieval Museum', checkins: 135, users: 112 },
  { name: 'Waterford Castle Hotel & Golf Resort',
    checkins: 335,
    users: 219 },
  { name: 'No.9 Café', checkins: 83, users: 39 },
  { name: 'Reginald\'s Tower', checkins: 444, users: 181 },
  { name: 'Costa Coffee', checkins: 123, users: 44 },
  { name: 'Athenaeum House Hotel', checkins: 395, users: 55 },
  { name: 'Bishop\'s Palace', checkins: 162, users: 116 },
  { name: 'The People\'s Park', checkins: 400, users: 137 }
```