Biostats 597E

Week 8 - Introduction to Web Scraping

Web Request

Web request method:

- **GET**: Requests data from a specified resource. It is what you use when visiting a webpage (focus more on this method)
- **POST** Submits data to be processed to a specified resource. For example, registering new user.

Web API

- Using web request to obtain data
- It provides nice and convinient interface
- It usually return well structured data in JSON or XML format
- The data is much easier to process

Example: http://freegeoip.net

```
library(httr)
res <- GET("http://freegeoip.net/csv/50.78.253.58")
content(res, "text")
```

Authentication

Some web APIs do not use authentication, so anyone can make API call for free.

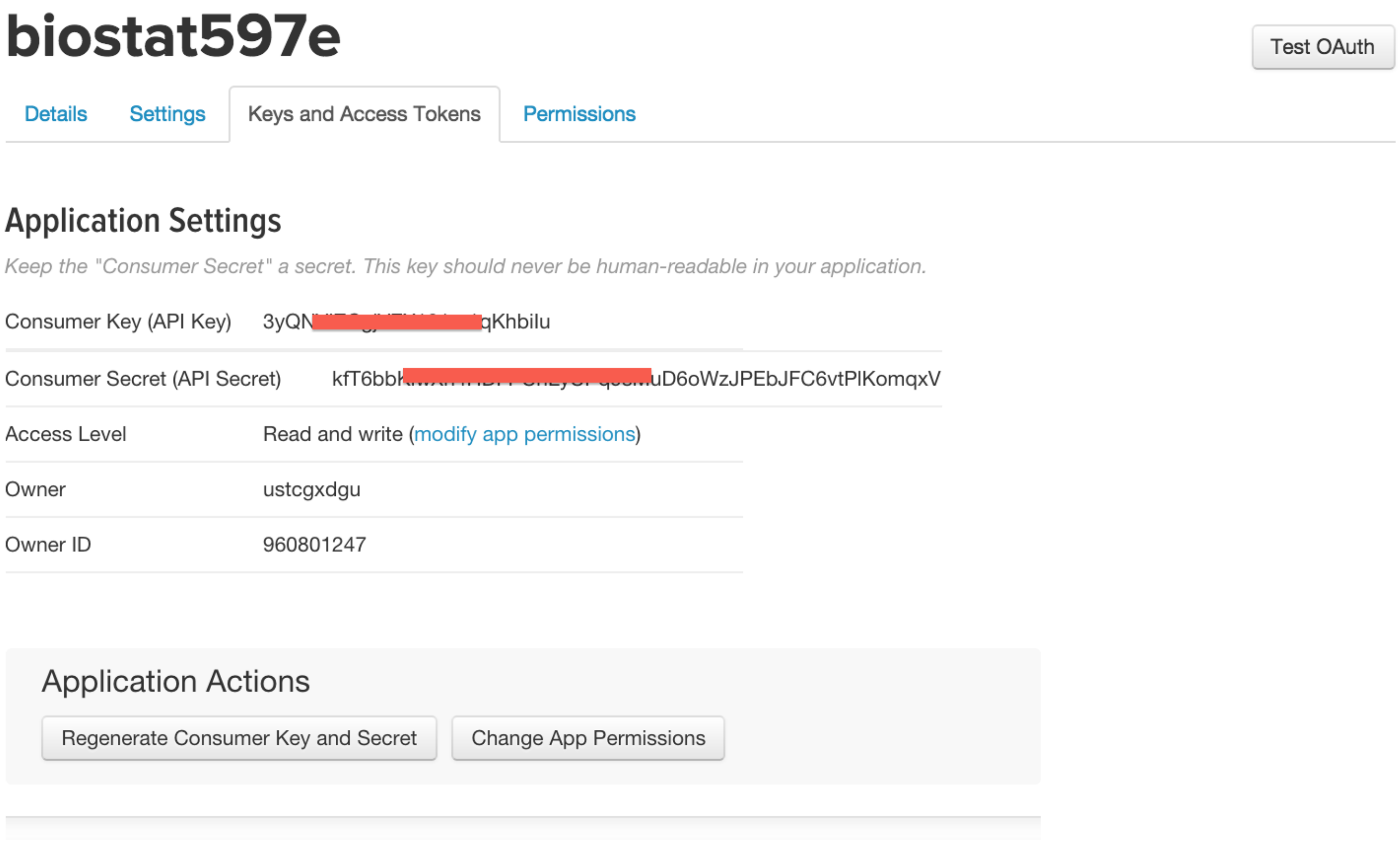
Some APIs require authentication, such as Twitter, to charge money or limit usage.

Obtain Twitter Authentication

- Register Twitter account
- Go to https://apps.twitter.com
- Create a New App and fill the information

Obtain Twitter Authentication

- Go to "Keys and Access" tab to obtain the API key and API secret
- Also create access token



biostat597e

Application Settings

Keep the "Consumer Secret" a secret. This key should never be human-readable in your application.

Consumer Key (API Key)	3yQN[redacted]qKhbilu
Consumer Secret (API Secret)	kfT6bbk[redacted]uD6oWzJPEbJFC6vtPlKomqxV
Access Level	Read and write (modify app permissions)
Owner	ustcgxdgu
Owner ID	960801247

Application Actions

User TwitteR Package

see Twitter.R for example

Job Search API Using indeed.com

indeed.com provides easy to use API to do your job search without scraping the page

First, we need obtain authentication

- Go to http://www.indeed.com/publisher
- Create an publisher account
- Log in account and go to 'XML Feed' to see your publisher id

See indeed.R for example