Sentiment Analysis
with
machinebox.io
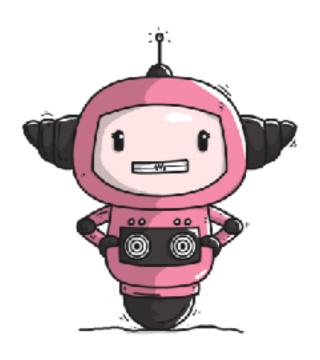
Requirements

- Go

- Docker: http://docker.com

- Textbox Image: *docker pull machinebox/textbox*

- MachineBox API Key: https://machinebox.io/login

- Twitter API keys: https://apps.twitter.com/

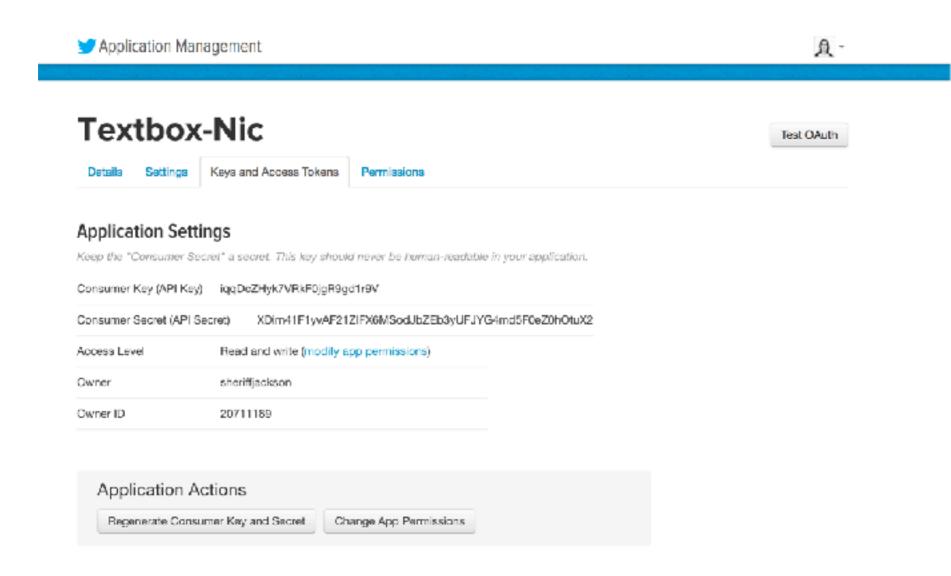# STEP 1 - Get Twitter Credentials

https://apps.twitter.com/

Create access tokens

Textbox-Nic

Test OAuth

Details   Settings   Keys and Access Tokens   Permissions

Application Settings

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

Consumer Key (API Key)   iqqDcZHyk7VRkF0jgR9gd1r9V

Consumer Secret (API Secret)   XDim41F1yvAF21ZIFX6MSodUbZEb3yUFJYG4md5F0eZ0hOtuX2

Access Level   Read and write (modify app permissions)

Owner   sheriffjackson

Owner ID   20711189

Application Actions

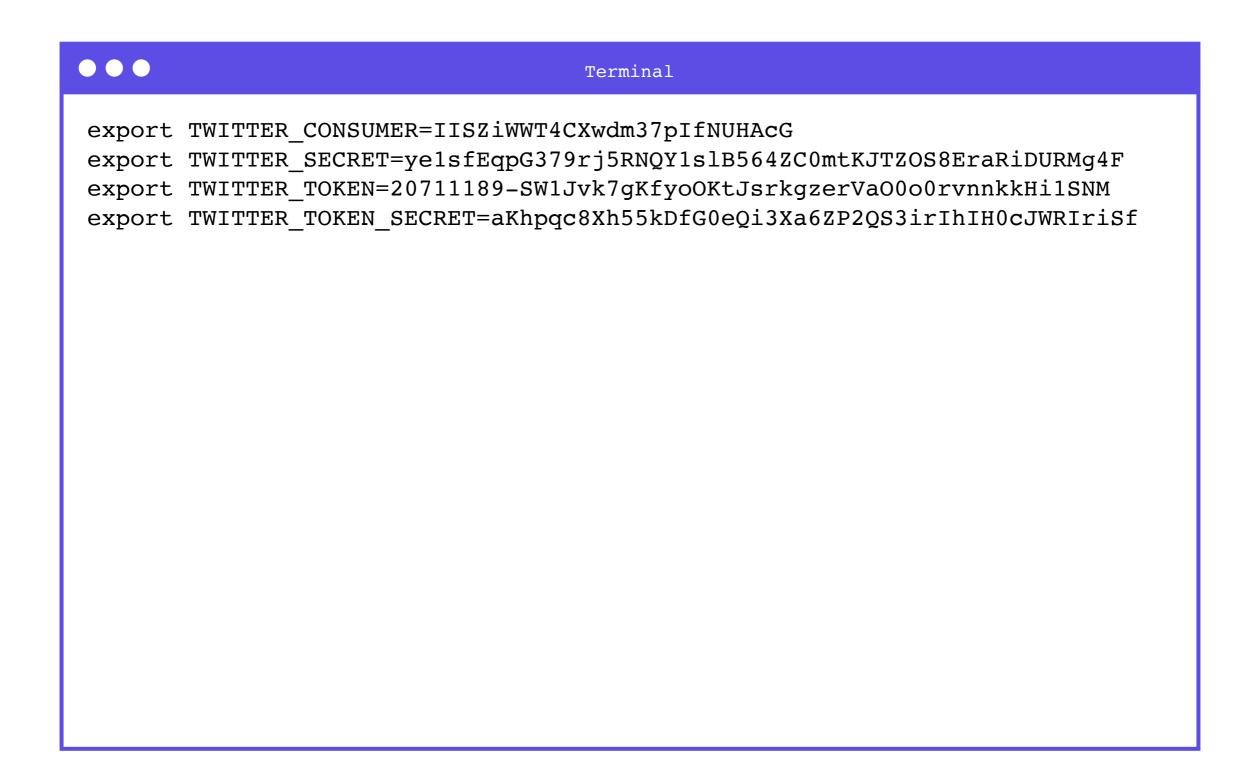Regenerate Consumer Key and Secret   Change App Permissions

Your Access Token

You haven't authorized this application for your own account yet.

By creating your access token here, you will have everything you need to make API calls right away. The access token generated will be assigned your application's current permission level.

Token Actions

Create my access token

Save to a file

```
export TWITTER_CONSUMER=IISZiWWT4CXwdm37pIfNUHAcG
export TWITTER_SECRET=ye1sfEqpG379rj5RNQY1slB564ZC0mtKJTZOS8EraRiDURMg4F
export TWITTER_TOKEN=20711189-SW1Jvk7gKfyoOKtJsrkgzerVaO0o0rvnnkkHi1SNM
export TWITTER_TOKEN_SECRET=aKhpqc8Xh55kDfG0eQi3Xa6ZP2QS3irIhIH0cJWRIriSf
```

Textbox

http://textbox.demo.gs/demo

go get packages

```
$ go get github.com/dghubble/go-twitter/twitter
$ go get github.com/dghubble/oauth1
$ go get github.com/machinebox/sdk-go/textbox
```

Setup the secrets for twitter

```go
                                    main.go

var consumerKey = os.Getenv("TWITTER_CONSUMER")
var consumerSecret = os.Getenv("TWITTER_SECRET")
var consumerToken = os.Getenv("TWITTER_TOKEN")
var consumerTokenSecret = os.Getenv("TWITTER_TOKEN_SECRET")

func main() {
    tweets := getTweets()
    getSentiment(tweets)
}
```

Create twitter client

```go
func getTweets() []twitter.Tweet {
    config := oauth1.NewConfig(consumerKey, consumerSecret)
    token := oauth1.NewToken(consumerToken, consumerTokenSecret)
    httpClient := config.Client(oauth1.NoContext, token)

    // Twitter client
    client := twitter.NewClient(httpClient)
}
```

main.go

Get the tweets

```go
func getTweets() []twitter.Tweet {
    // ...

    // Home Timeline
    tweets, _, _ := client.Timelines.HomeTimeline(
        &twitter.HomeTimelineParams{
            Count: 20,
        },
    )

    return tweets
}
```

Create textbox client

```go
func getSentiment(tweets []twitter.Tweet) {
  client := textbox.New("http://textbox.demo.gs")
}
```

Loop over tweets and get analysis

```go
func getSentiment(tweets []twitter.Tweet) {
  //...

    for _, tweet := range tweets {
        analysis, err := client.Check(strings.NewReader(tweet.Text))
    }
}
```

Get the sentiment

```go
func getSentiment(tweets []twitter.Tweet) {
  //...

  sentimentTotal := 0.0
  for _, sentence := range analysis.Sentences {
     sentimentTotal += sentence.Sentiment
  }

  // higher is more positive, lower is more negative
  sentiment := sentimentTotal float64(len(analysis.Sentences)))
}
```

Resources:

- https://github.com/nicholasjackson/textbox-example

- https://github.com/machinebox/mood/blob/master/textboxtally/tally.go

- https://github.com/nicholasjackson/emojify

- https://machinebox.io

- http://godoc.org/github.com/machinebox/sdk-go