

Twitter client for R

Jeff Gentry

October 20, 2009

1 Introduction

Twitter is a popular service that allows users to broadcast short messages (*'tweets'*) for others to read. These can be used to communicate with friends, to display headlines, for restaurants to list daily specials, and more.

The *twitteR* package is intended to provide access to the Twitter API within R. Using the S4 classes *user*, *status* and *directMessage*, users can read and write information via the Twitter server.

1.1 Disclaimer

At this time, the package does not yet fully support the Twitter API. Currently basic operations are supported but there are still gaps in searching capabilities as well as account administration. Also, many commands do not yet support all possible arguments to calls. Lastly, because many authenticated action would require a valid Twitter login, various operations in this vignette are pregenerated.

2 Getting Started

The first basic to know is the `initSession` command. This will provide you with a token that you will be passing around to most/all of the other calls from the *twitteR* package. Any functionality which does not require you to be authenticated will work without a session token, but will not work otherwise.

```
> library(twitteR)
```

To use the `initSession` command, supply your username and password, and assign this to a variable:

```
> sess <- initSession('myname', 'mypassword')
```

3 Time to talk about timelines

Just as there are various *timelines* in Twitter, the *twitteR* package provides various interfaces to access them. The first and most obvious would be the *public timeline*, which retrieves the 20 most recent public tweets on Twitter. As this is fully public, we do not need to use our session token, although it won't hurt to do so.

```
> publicTweets <- publicTimeline()
> length(publicTweets)

[1] 20

> publicTweets[1:5]

[[1]]
[1] "GoldfishSparxXx: Ever had a miserable looking person come stand next to you hoping you

[[2]]
[1] "mukking: @taltal ̃A¿̃A■̃A¿̃A■è■lŸãAçãAçãCãCŁ'ãAŁãA■lãAÑãAçãA■ãAÑãAçãAéĂsæIJnãAřãCŁãC■ãAŮ

[[3]]
[1] "ABN_956: @R_77 imma cop otra fitted... dey givn me me 25% off cuz itz finna be my C day

[[4]]
[1] "nozo_non: ăēsăCŁ'ăAŮăAĐăL'ăăēsăL'■"

[[5]]
[1] "chri5t1na: I saw my old PE teacher Mrs Green earlier running down the road. It was more
```

Similarly, we can look at a particular user's timeline. In this case, whether or not you need to include your session token depends on if their feed is protected or not. For this example, let's use a public user, *cranatic*. Note that you can specify either a user's screen name, or an actual *user* object to the function.

```
> cranTweets <- userTimeline("cranatic")
> cranTweets[1:5]

[[1]]
[1] "cranatic: Update: approximator, CalciOMatic, contfrac, deSolve, eha, epicalc, ks, magic

[[2]]
[1] "cranatic: New: adaptTest. #rstats"

[[3]]
[1] "cranatic: Update: aylmer, BACCO, boot, bqtl, calibrator, clv, Davies, effects, emulator
```

```
[[4]]
[1] "cranatic: New: bcv. #rstats"
```

```
[[5]]
[1] "cranatic: Update: adimpro, aws, bootspecdens, ccgarch, CircStats, compare, drfit, dti,
```

The `userTimeline` function currently only supports the default of returning the 20 most recent tweets.

Suppose you wish to see what your friends are up to, for this we have `friendsTimeline`, which will return the 20 most recent tweets from your friends. This function does require you to use your login token:

```
> friendTweets <- friendsTimeline(sess)
```

Lastly, you can see a list of the 20 most recent tweets in which you were mentioned via `mentions`. As with `friendsTimeline`, this requires your login token

```
> myMentions <- mentions(sess)
```

3.1 Seeing what other R folks are up to

The `Rtweets` function will retrieve the 20 most recent tweets that carry the `rstats` hash tag, which is commonly used by members of the *R* community. For this command, using your login token is optional - it is unlikely to change the results, but it is possible for that to happen:

```
> rt <- Rtweets()
> rt[1:5]
```

```
[[1]]
[1] "revodavid: REvolution Computing gets major funding and new CEO. http://tinyurl.com/ylx9
```

```
[[2]]
[1] "hadleywickham: RT @CMastication ggplot2 graph seen in the wild (well, O'Reilly wild) ht
```

```
[[3]]
[1] "revodavid: At Predictive Analytics World #PAW in DC. Come see me in the REvolution boot
```

```
[[4]]
[1] "onertipaday: Some Interesting packages in R http://bit.ly/4jgWq #rstats"
```

```
[[5]]
[1] "rantalainen: Link: On the 9th of October, Brian Ripley committed the revision 50 000 in
```

4 Looking at users

To take a closer look at a Twitter user (including yourself!), run the command `getUser`. As with many functions, whether or not you need to use your login token depends on if this user profile is protected or not.

```
> crantastic <- getUser("crantastic")
> crantastic
```

```
[1] "Crantastic"
```

Furthermore, we can look at this user's friends, as well as those following them (same disclaimer regarding the login token applies):

```
> friends <- userFriends("crantastic")
> friends[[1]]
```

```
[1] "ebertchicago"
```

```
> followers <- userFollowers("crantastic")
> followers[1:5]
```

```
[[1]]
```

```
[1] "Nelson_17"
```

```
[[2]]
```

```
[1] "Bradley_446"
```

```
[[3]]
```

```
[1] "rebecca_a_moses"
```

```
[[4]]
```

```
[1] "ellydisapproves"
```

```
[[5]]
```

```
[1] "klassina"
```

4.1 T

he user class

In both of the above cases, the argument can be a string noting the user's screen name, or a *user* object. Let's look more closely at the *user* class to see what is available within it.

The following is a look at the collection of available get methods for the *user* class:

```
> curUser <- friends[[1]]
> screenName(curUser)
```

```

[1] "ebertchicago"
> description(curUser)
[1] "Thinker, writer and blogger, shallow and profound, correct and mistaken; film critic, C
> tweetCount(curUser)
[1] 117
> followersCount(curUser)
[1] 10821
> favoritesCount(curUser)
numeric(0)
> friendsCount(curUser)
[1] 5
> name(curUser)
[1] "Roger Ebert"
> protected(curUser)
[1] FALSE
> verified(curUser)
[1] FALSE
> location(curUser)
[1] "Chicago"
> id(curUser)
[1] 79797834
> lastStatus(curUser)
[1] "Unknown: Thirty Republicans who like corporations more than rape victims: http://j.mp/3

```

5 Tweeting

Tweeting, or updating one's status, can be done via the function `tweet` (or the identical `updateStatus`). To do this, simply post your message and include your login token. The return value is the *status* object that represents your tweet.

```
> tweet <- tweet('this is a tweet', sess)
```

5.1 When your tweet goes awry

Suppose you realize you've made a typo, or said something you shouldn't have. For this, we have `deleteStatus`, which takes an object of class `status` and your login token. Assuming you have the authority to delete the `status` object, it will be removed.

```
> deleteStatus(tweet, sess)
```

5.2 T

The `status` class

The `status` class has the following methods defined:

- *text*: Retrieves the text of the tweet
- *screenName*: Screen name of the sender
- *id*: Retrieves the ID of the tweet
- *created*: Retrieves the date the tweet was created
- *replyToSN*: If this is a reply, the screen name for the reply
- *replyToSID*: If this is a reply, the message this is in reply to
- *replyToUID*: If this is a reply, the user this is in reply to
- *favorited*: If this reply is favorited
- *statusSource*: Source of the tweet

6 Direct messages, aka DMs

Direct Messages (DMs) can be sent with the `dmSend` command, which takes your message, the user (either a string or a `user` object), and your login token:

```
> dm <- dmSend('this is a test', 'crantastic', sess)
```

You can also see the DMs that you've sent and received:

```
> sent <- dmSent(sess)
> rcvd <- dmGet(sess)
```

These functions all return objects of class `directMessage`, which have the following methods:

- *text*: Retrieves the text of the message
- *recipient*: Retrives the `user` object of the recipient

- *recipientSN*: Retrieves the screen name of the recipient
- recipientID: Retrieves the ID of the recipient
- *sender*: Retrieves the user object of the sender
- senderSN: Retrieves the screen name of the sender
- *senderID*: Retrieves the ID of the sender
- id: Retrieves the ID
- *created*: Retrieves the creation date

7 Session Information

The version number of R and packages loaded for generating the vignette were:

```
R version 2.11.0 Under development (unstable) (2009-10-20 r50178)
x86_64-unknown-linux-gnu
```

locale:

```
[1] LC_CTYPE=en_US.UTF-8      LC_NUMERIC=C
[3] LC_TIME=en_US.UTF-8      LC_COLLATE=en_US.UTF-8
[5] LC_MONETARY=C            LC_MESSAGES=en_US.UTF-8
[7] LC_PAPER=en_US.UTF-8     LC_NAME=C
[9] LC_ADDRESS=C             LC_TELEPHONE=C
[11] LC_MEASUREMENT=en_US.UTF-8 LC_IDENTIFICATION=C
```

attached base packages:

```
[1] tools      stats      graphics  grDevices  utils      datasets  methods
[8] base
```

other attached packages:

```
[1] twitterR_0.1.2  rjson_0.1.7    RCurl_1.2-0    bitops_1.0-4.1
```