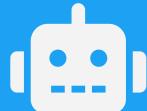


Make a Twitter bot with {rtweet} and GitHub Actions



LondonR, 2022-02-17

matt-dray.com

<https://matt-dray.github.io/mapbot-londonr>

tl;dr

- Visit [@londonmapbot](#) ↗
- Fork on [GitHub](#) ↗
- Read the [original blog](#) ↗

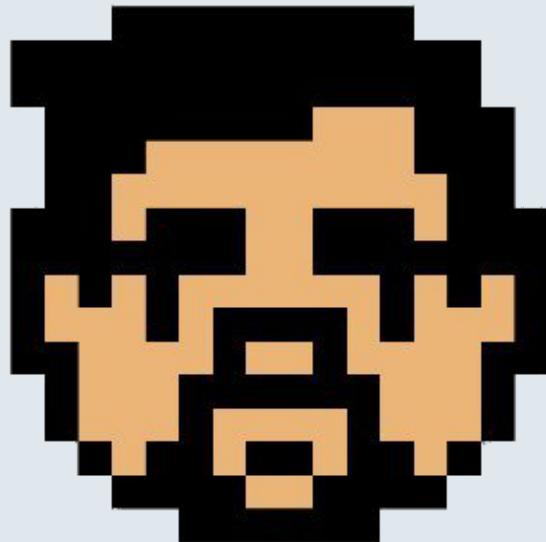
Eh?

1. Who?

2. What?

3. How?

Who?



[🌐 matt-dray.com](http://matt-dray.com) [@mattdray](https://twitter.com/mattdray) [🌐 matt-dray](https://matt-dray.com) [📝 rostrum.blog](https://rostrum.blog)



2022

[Introduce me to your {soccercolleagues}](#)

2022-02-04

[Impress with {keypress}](#)

2022-01-19

[Wordle, twirdle and eldrow](#)

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[The most popular Animal Crossing villagers](#)

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2021

[Your workout route \(in three dimensions!\)](#)

2021-12-30

[{itdepends} on {lubridate}](#)

2021-11-27

[R has obscenely long function names](#)

2021-11-27

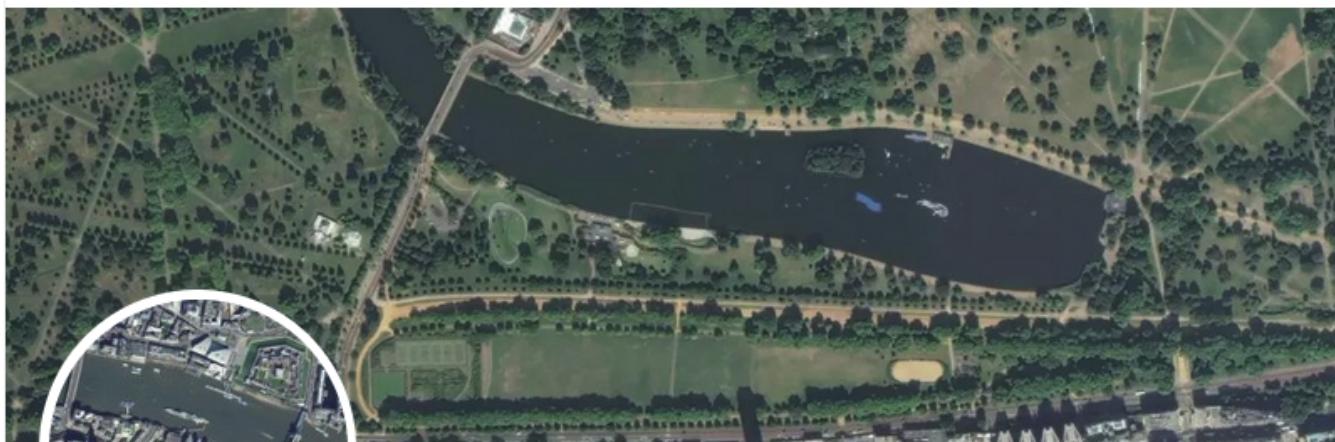
[Deep fried memes in R](#)

2021-11-07

What?

**londonmapbot**

11.8K Tweets

**Following****londonmapbot**

@londonmapbot Follows you

📍 🤖 Random Greater-London coordinates fed to the Mapbox API and posted with {rtweet} via a GitHub Action. A bot by [@mattdray](#).

⌚ London ⚡ github.com/matt-dray/lond... 📅 Joined September 2020

36 Following 37 Followers

Followed by Steve Dempsey, Matt Kerlogue, and 3 others you follow

**londonmapbot**

11.8K Tweets

Following

**londonmapbot** @londonmapbot · Feb 8

51.5151, -0.0413

openstreetmap.org/#map=17/51.5151/-0.0413

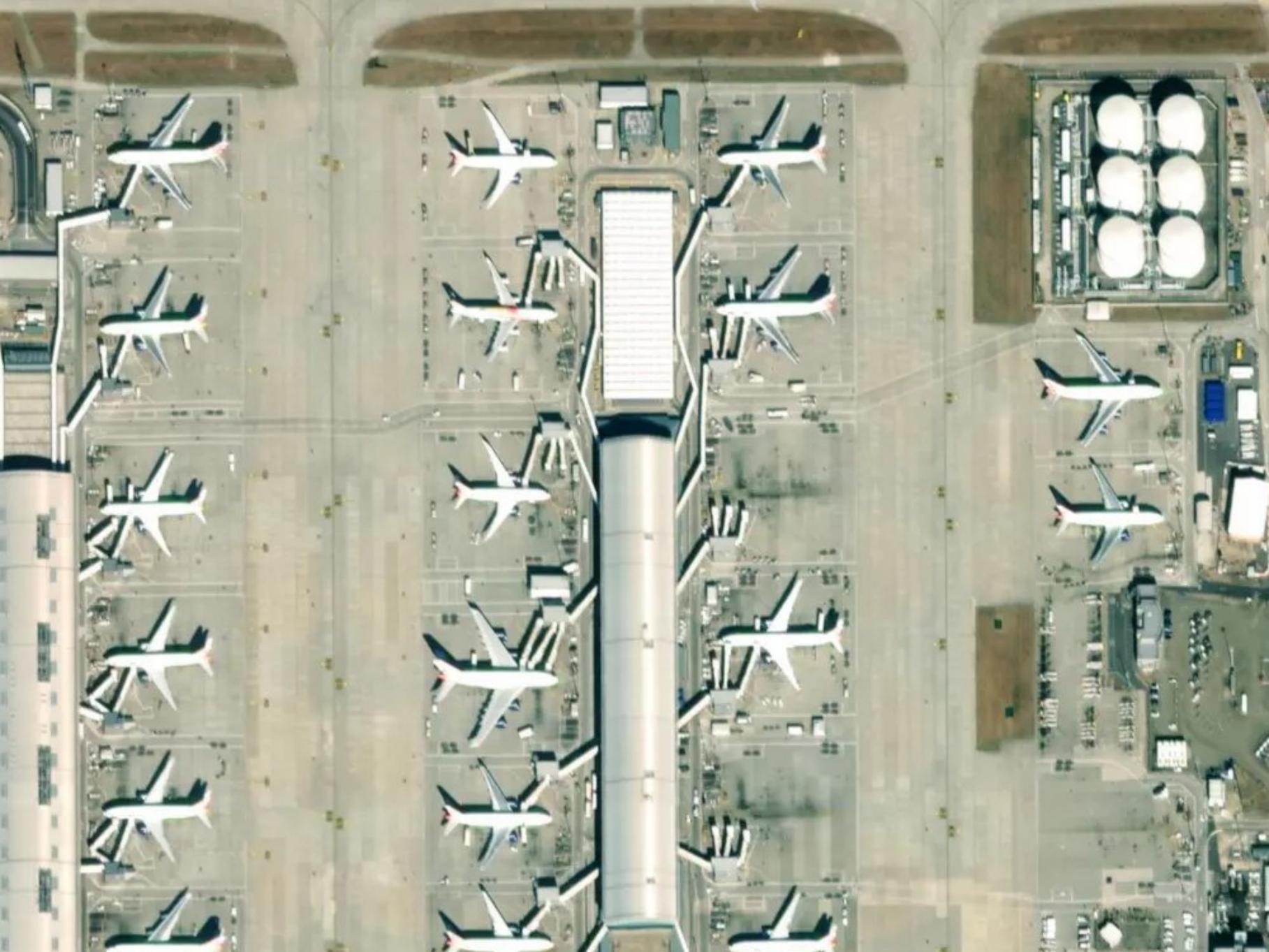
...

**londonmapbot** @londonmapbot · Feb 8

...











{rtweet} [⌚]

- Access Twitter from R
- Free API, with limitations



rtweet

Use twitter from R. Get started by reading [vignette\("rtweet"\)](#).

Installation

To get the current released version from CRAN:

```
install.packages("rtweet")
```



Usage

All users must be authenticated to interact with Twitter's APIs. The easiest way to authenticate is to use your personal twitter account - this will happen automatically (via a browser popup) the first time you use an rtweet function. See [auth_setup_default\(\)](#) for details. Using your personal account is fine for casual use, but if you are trying to collect a lot of data it's a good idea to authentication with your own Twitter "app". See [vignette\("auth", package = "rtweet"\)](#) for details.

```
library(rtweet)
```

rtweet should be used in strict accordance with Twitter's [developer terms](#).

Search tweets or users

Search for up to 10,000 tweets containing #rstats, the common hashtag used to refer to the R

Links

[View on CRAN](#)

[Browse source code](#)

[Report a bug](#)

License

[MIT + file LICENSE](#)

Community

[Contributing guide](#)

Citation

[Citing rtweet](#)

Developers

[Michael W. Kearney](#)

Author

[Lluís Revilla Sancho](#)

Author

[Hadley Wickham](#)

Author

[More about authors...](#)

Dev status



- Satellite imagery via API ®
- Free, with limitations ®

**Parameters**

access token from your account page

YOUR_MAPBOX_ACCESS_TOKEN

style

Mapbox Streets

 Use my own public style

width in pixels height in pixels

300

200

center bounding box auto

longitude latitude

-0.1015

51.4977

zoom zoom level

15.84

Optional parameters

bearing rotate map

0

pitch tilt map

0

overlays add a marker, path, or GeoJSON

+ add overlay

@2x render map at 2x scale

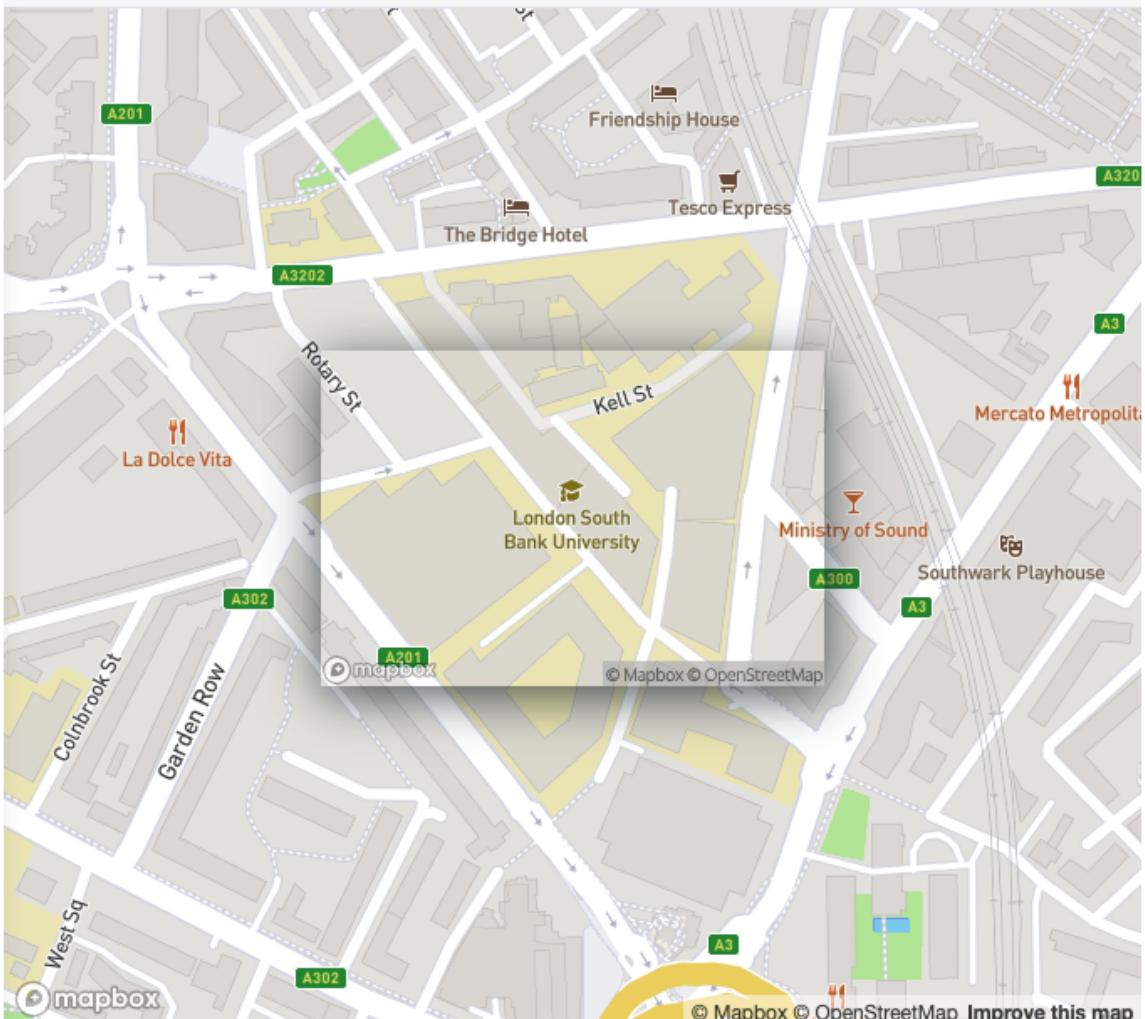
**style parameters**

change map style at render time

add a layer set a filter

Request URL

```
https://api.mapbox.com/styles/v1/mapbox/streets-v11/static/-0.1015,51.4977,15.84,0/300x200?access_token=YOUR_MAPBOX_ACCESS_TOKEN
```





GitHub Actions

- Run code on schedule
- Free, with limitations



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All workflows

R-CMD-check

pkgdown

test-coverage

All workflows

Showing runs from all workflows

Filter workflow runs

84 workflow runs

Event ▾ Status ▾ Branch ▾ Actor ▾

✓ Add GH Action for pkgdown

pkgdown #1: Commit 7866a45 pushed by matt-dray

main

3 months ago ...
3m 39s

✓ Add GH Action for pkgdown

test-coverage #41: Commit 7866a45 pushed by matt-dray

main

3 months ago ...
1m 58s

✓ Add GH Action for pkgdown

R-CMD-check #42: Commit 7866a45 pushed by matt-dray

main

3 months ago ...
15m 57s

✓ Merge pull request #33 from matt-dray/...

test-coverage #40: Commit 6e65a4b pushed by matt-dray

main

6 months ago ...
5m 15s

How?



1. Start a new account
2. Get developer status 
3. Get elevated API access 
4. Get keys 



1. Sign up 
2. Get tokens 



1. Create a public repo
2. Store keys/tokens as secrets [⌚]
3. Create scripts

Two files (!)

- bot/
 - .github/workflows/bot.yml
 - bot.R

bot.yml ↗

```
name: londonmapbot

on:
  schedule:
    - cron: '42 0/2 * * *'

jobs:
  londonmapbot-post:
    runs-on: macOS-latest
    env:
      TWITTER_CONSUMER_API_KEY: ${{ secrets.TWITTER_CONSUMER_API_KEY }}
      TWITTER_CONSUMER_API_SECRET: ${{ secrets.TWITTER_CONSUMER_API_SECRET }}
      TWITTER_ACCESS_TOKEN: ${{ secrets.TWITTER_ACCESS_TOKEN }}
      TWITTER_ACCESS_TOKEN_SECRET: ${{ secrets.TWITTER_ACCESS_TOKEN_SECRET }}
      MAPBOX_PUBLIC_ACCESS_TOKEN: ${{ secrets.MAPBOX_PUBLIC_ACCESS_TOKEN }}
    steps:
      - uses: actions/checkout@v2
      - uses: r-lib/actions/setup-r@master
      - name: Install rtweet package
        run: Rscript -e 'install.packages("rtweet", dependencies = TRUE)'
      - name: Create and post tweet
        run: Rscript londonmapbot-tweet.R
```

bot.yml detail

Schedule

```
on:  
  schedule:  
    - cron: '42 0/2 * * *'
```

Secrets

```
env:  
  TWITTER_CONSUMER_API_KEY: ${{ secrets.TWITTER_CONSUMER_API_KEY }}
```

bot.yml detail

Setup

```
steps:  
  - uses: actions/checkout@v2  
  - uses: r-lib/actions/setup-r@master
```

Run

```
- name: Install rtweet package  
  run: Rscript -e 'install.packages("rtweet", dependencies = TRUE)'  
- name: Create and post tweet  
  run: Rscript londonmapbot-tweet.R
```

bot.R ⚡

Token

```
# Create Twitter token
londonmapbot_token <- rtweet::create_token(
  app = "londonmapbot",
  consumer_key = Sys.getenv("TWITTER_CONSUMER_API_KEY"),
  consumer_secret = Sys.getenv("TWITTER_CONSUMER_API_SECRET"),
  access_token = Sys.getenv("TWITTER_ACCESS_TOKEN"),
  access_secret = Sys.getenv("TWITTER_ACCESS_TOKEN_SECRET"))
)
```

bot.R ⚡

Image

```
# Generate random coordinates within specific limits
lon <- round(runif(1, -0.489, 0.236), 4)
lon <- format(lon, scientific = FALSE)
lat <- round(runif(1, 51.28, 51.686), 4)

# Build URL and fetch image from Mapbox API
img_url <- paste0(
  "https://api.mapbox.com/styles/v1/mapbox/satellite-v9/static/",
  paste0(lon, ",",
  lat),
  ",15,0/600x400@2x?access_token=",
  Sys.getenv("MAPBOX_PUBLIC_ACCESS_TOKEN")
)

# Download the image to a temporary location
temp_file <- tempfile()
download.file(img_url, temp_file)
```

bot.R ⚡

Tweet

```
# Build the status message (text and URL)
latlon_details <- paste0(
  lat, ", ", lon, "\n",
  "https://www.openstreetmap.org/#map=17/", lat, "/", lon, "/"
)

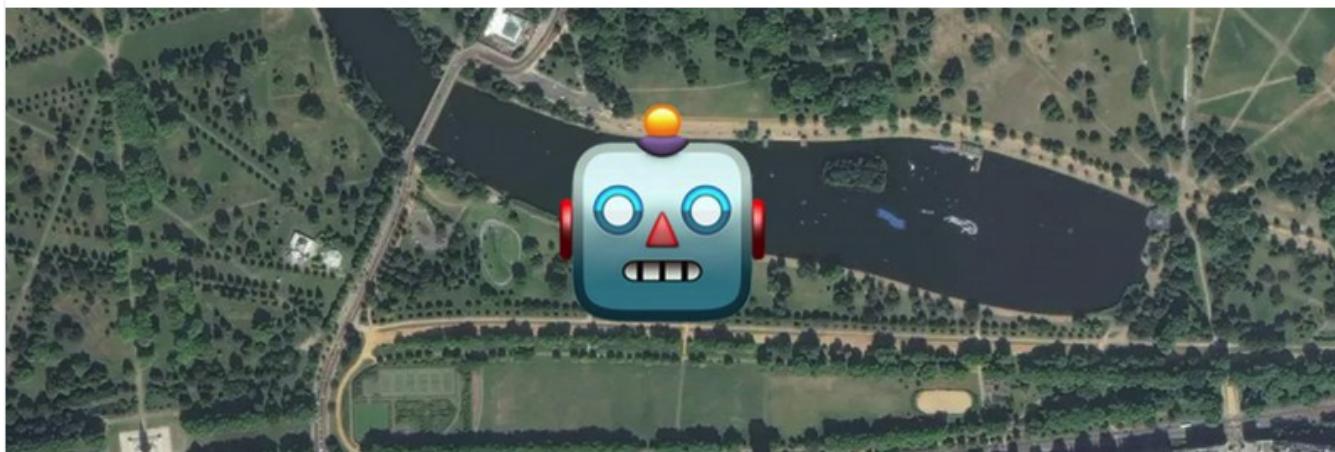
# Post the image to Twitter
rtweet::post_tweet(
  status = latlon_details,
  media = temp_file,
  token = londonmapbot_token
)
```

The mapbotverse 



The mapbotverse

@mattdray



The mapbotverse

Bots that have used and improved code from @londonmapbot, or have been inspired by it.



Matt Dray @mattdray

18 Members **2 Followers**

[Edit List](#)



londonmapbot @londonmapbot · 7m

51.6242, -0.061





España desde el cielo

482 Tweets

[Follow](#)**España desde el cielo @esmapbot · 12h**

38.7797, -0.7653

[google.es/maps/@38.7797,...](http://google.es/maps/@38.7797,-0.7653)

...



**narrowbotR**

10.3K Tweets

Follow**narrowbotR @narrowbotR · Dec 7, 2021**

...

📍 : Sandhill Lake Winding Hole

ℹ️ : winding hole

🌐 : openstreetmap.org/?mlat=53.30732...📸: Photo by Roger Bunting on Flickr flickr.com/photos/2398551...

← Big Book of R (250+ free R programming books)
303 Tweets



Big Book of R
250+ Free R
programming books

...

Following

Big Book of R (250+ free R programming books)

@BigBookofR

A collection of over 250 (mostly) free R programming books. Follow to discover books highlighted from the collection. Maintained by @OscarBaruffa and @ivelasq3

⌚ @ your fingertips ⚡ bigbookofr.com 📅 Joined December 2021

2 Following 2,057 Followers

Followed by Pachá, Meghan Harris, and 23 others you follow

0

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matt-dray / londonmapbot

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| | | | |
|---|--|------------------|---------------|
|  matt-dray | Include new mapbotverse accounts, hide be... | ee350a3 on 1 Jan | 31 commits |
|  .github/workflows | Execute GHA every two hours | | 6 months ago |
|  LICENSE.md | Add license and readme | | 17 months ago |
|  README.md | Include new mapbotverse accounts, hide behind... | | last month |
|  londonmapbot-tweet.R | Add lation text into status | | 16 months ago |

README.md

londonmapbot

[repo status](#) [Concept](#) [Twitter](#) [@londonmapbot](#) [rostrum.blog](#) [post](#)

Source for the Twitter bot [@londonmapbot](#). It posts satellite images of random coordinates in Greater London using `{rtweet}`, MapBox and GitHub Actions. Built by [@mattdray](#).

About

 Twitter bot: random London coordinates fed to the Mapbox API and posted with `{rtweet}` via a GitHub Action

 www.twitter.com/londonmapbot

[twitter-bot](#) [twitter](#) [rstats](#) [mapbox](#)
[rtweet](#) [mapbox-api](#) [github-actions](#)

 [Readme](#)

 [MIT License](#)

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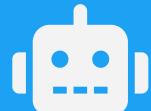
 [2 watching](#)

 [11 forks](#)

Languages

 R 100.0%

Make a Twitter bot with {rtweet} and GitHub Actions



Visit [@londonmapbot](#) ↗

Fork on [GitHub](#) ↗

Read the original blog ↗