

# Twitter Research

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# Chapter 1

## Preface

Hey there!



## Chapter 2

# Introduction

This book serves as a handbook for Twitter Research in R. It was specifically developed for this research project .





## Chapter 3

# The Dataset

### 3.1 Variables

### 3.2 Aggregation Levels

### 3.3 Limitations



## Chapter 4

# Analysis

### 4.1 Social Stats

### 4.2 Sentiment

- LIWC, SentiStrength

### 4.3 Geocoding

- tidygeocoder
- Methods
- Limitations / Common Mistakes
- OSM API

### 4.4 User Classification

### 4.5 NLP

- Topic Modeling



## Chapter 5

# Packages & Frameworks

List of useful pack

### 5.1 Targets

### 5.2 Tidyverse



## Chapter 6

# Common Task

### 6.1 Code Snippets

#### 6.1.0.1





## Chapter 7

# The Research Project

### 7.1 Styleguide

### 7.2 Coding Philosophy

### 7.3 Team Organisation



## Chapter 8

# Learning Resources

### 8.1 Reporting

#### 8.1.1 R Markdown

- <https://rmarkdown.rstudio.com>
  - <https://rmarkdown.rstudio.com/gallery.html> (Collection of Books, Websites and More)
  - <https://github.com/rstudio/cheatsheets/raw/master/rmarkdown-2.0.pdf> (RMarkdown Cheatsheet)
- <https://bookdown.org/yihui/rmarkdown/> (“R Markdown: The Definitive Guide”, User Manual)
- <https://bookdown.org/yihui/rmarkdown-cookbook/> (“R Markdown Cookbook”, advanced user manual)
- <https://holtzy.github.io/Pimp-my-rmd/> (Tipps & Tricks)

#### 8.1.2 Knitr

- <https://yihui.org/knitr/options/> (knitr options manual)
- <https://monashdatafluency.github.io/r-rep-res/appendix.html#long-list-of-chunk-options> (“Long list of chunk options”)
- <https://pandoc.org/MANUAL.html#options> (all available pandoc options for `pandoc_args: []`)

#### 8.1.3 Bookdown / Blogdown

- <https://bookdown.org/yihui/bookdown/> (“bookdown: Authoring Books and Technical Documents with R Markdown”)

- <https://bookdown.org/yihui/blogdown/> (“blogdown: Creating Websites with R Markdown”, User Manual)
  - <https://bookdown.org/yihui/rmarkdown/rmarkdown-site.html#site-configuration> (`_site.yaml` help)

#### 8.1.4 Shiny

#### 8.1.5 Dashboards

#### 8.1.6 HTML

- <https://validator.w3.org>

### 8.2 R

- <https://bookdown.org/csgillespie/efficientR/> (“Efficient R Programming”)
- 

### 8.3 Data Science

- <https://beanumber.github.io/mdsr2e/> (“Modern Data Science with R, 2nd edition”, great Data Science textbook)
  - <https://beanumber.github.io/sds192/schedule.html> (Data Science Online Course)
- <https://r4ds.had.co.nz> (“R for Data Science”)
- <https://github.com/rfordatascience/tidytuesday> (Coding Challenges for Practice)

### 8.4 Visualization & Graphics

- <https://clauswilke.com/dataviz/> (“Fundamentals of Data Visualization”, textbook)
- <https://r-graphics.org> (“R Graphics Cookbook, 2nd edition”, textbook)
- <https://www.r-graph-gallery.com> (Graph Inspirations)
- <https://www.data-to-viz.com> (Plotting decision tree)
- [https://ilias.uni-marburg.de/data/UNIMR/lm\\_data/lm\\_2092231/](https://ilias.uni-marburg.de/data/UNIMR/lm_data/lm_2092231/) (“Creating Publication Quality Graphics in R”)

## 8.5 R Material

- <https://bookdown.org> (List of Books)
- <https://csgillespie.github.io/efficientR/> (“Efficient R programming”)
- <https://adv-r.hadley.nz> (“Advanced R”)
- <https://r-pkgs.org> (“R Packages”)
- <https://style.tidyverse.org> (“The tidyverse style guide”)
- <https://rstudio.com/resources/cheatsheets/> (Cheat Sheet Collection)
- <https://github.com/qinwf/awesome-R> (Resource list)

## 8.6 Git & GitHub

- <https://guides.github.com/introduction/flow/#:~:text=ProTip,a%20feature%20or%20a%20fix.> (Understanding the GitHub flow in 5 min)
- <https://try.github.io> (“Resources to learn Git”)
- <https://happygitwithr.com> (“Happy Git and GitHub for the useR”)

## 8.7 Geotagging & geospatial analysis

- <https://geocompr.robinlovelace.net/> (“Geocomputation with R”, textbook)

## 8.8 Machine Learning

- <http://faculty.marshall.usc.edu/gareth-james/ISL/> (“An Introduction to Statistical Learning”)
  - <http://www-stat.stanford.edu/ElemStatLearn>
- <https://www.tidymodels.org/learn/statistics/tidy-analysis/>
- [https://scikit-learn.org/stable/user\\_guide.html](https://scikit-learn.org/stable/user_guide.html)
- <https://towardsdatascience.com/text-classification-in-python-dd95d264c802>
- [https://scikit-learn.org/stable/tutorial/text\\_analytics/working\\_with\\_text\\_data.html](https://scikit-learn.org/stable/tutorial/text_analytics/working_with_text_data.html)

## 8.9 Twitter API & Tweet JSON

- <https://developer.twitter.com/en/docs/twitter-api/v1/data-dictionary/overview/intro-to-tweet-json>

- <https://developer.twitter.com/en/docs/twitter-api/v1/data-dictionary/overview/user-object> (User Object)
- <https://developer.twitter.com/en/solutions/academic-research/resources>

### 8.9.1 Twitter Legal Policies

- [https://developer.twitter.com/en/docs/twitter-api/v1/tweets/timelines/api-reference/get-statuses-user\\_\\_timeline](https://developer.twitter.com/en/docs/twitter-api/v1/tweets/timelines/api-reference/get-statuses-user__timeline)

## 8.10 Project Management

### 8.10.1 {Targets}

- <https://wlandau.github.io/targets/reference/index.html>

### 8.10.2 The {Drake} Package

- <https://books.ropensci.org/drake/> (The drake R Package User Manual)
  - <https://books.ropensci.org/drake/index.html#documentation> (Official Learning Resources)
  - <https://books.ropensci.org/drake/plans.html#plans> (Drake Plan Guide)
- <https://ropensci.org/commcalls/2019-09-24/> (Talk by Drake creator Will Landau)
- <https://www.milesmcbain.com/posts/the-drake-post/> (Introduction to {Drake})
- [https://wlandau.shinyapps.io/drakeplanner/\\_w\\_88465da4/](https://wlandau.shinyapps.io/drakeplanner/_w_88465da4/) (Shiny App to plan Drake Workflows)

## Chapter 9

# Twitter API

### 9.1 Getting Access

### 9.2 Twurl

### 9.3 From API to R





## Chapter 10

# Appendix A

### 10.1 Ethics in Social Media Research

#### 10.1.1 Anonymisation