MY-DATA607-Week09-NYTimes-API

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Contents

Week 9 - Assignment - Web APIs (NY Times)

The New York Times web site provides a rich set of APIs, as described here.

You'll need to start by signing up for an API key.

Your task is to choose one of the New York Times APIs, construct an interface in R to read in the JSON data, and transform it into an R DataFrame.

Load libraries

```
library(XML)
library(rlist)
library(knitr)
library(kableExtra)
```

```r
library(jsonlite)
library(RCurl)
library(tidyr)
library(dplyr)
```

Since Hallowe'en is in a few days, let's look for articles on this topic

```r
# API key from website registration
MY_api_key <- "&api-key=WUNJOM1fVGLXpEzPYnHXnhONs8fFYU9V"

# search for articles with keyword "halloween"
url <- "http://api.nytimes.com/svc/search/v2/articlesearch.json?q=halloween"
request <- paste0(url, "&", MY_api_key)
result <- fromJSON(request)
```

```r
#pull $docs from result
NYT_docs <- result$response$docs

### Confirm that it's a dataframe
class(NYT_docs)
```

```
## [1] "data.frame"
```

```r
#get the column names
NYT_colnames <- colnames(NYT_docs)
t(t(NYT_colnames))
```

```
##        [,1]
## [1,] "web_url"
## [2,] "snippet"
## [3,] "lead_paragraph"
## [4,] "abstract"
## [5,] "print_page"
## [6,] "source"
## [7,] "multimedia"
```

```
##  [8,] "headline"
##  [9,] "keywords"
## [10,] "pub_date"
## [11,] "document_type"
## [12,] "news_desk"
## [13,] "section_name"
## [14,] "byline"
## [15,] "type_of_material"
## [16,] "_id"
## [17,] "word_count"
## [18,] "uri"
## [19,] "subsection_name"
```

There is a lot of data here, not all of it interesting. . .

pull web_url from NYT_docs

```
NYT_web_url <- NYT_docs$web_url
NYT_web_url %>%
  kable(col.names="Web_URL",row.names=1:10) %>%
  kable_styling(c("striped", "bordered"))
```

	Web_URL
1	https://www.nytimes.com/2019/10/25/nyregion/nooses-blackface-halloween-decorations.html
2	https://www.nytimes.com/2019/10/24/us/pop-culture-halloween-costumes.html
3	https://www.nytimes.com/2019/10/11/reader-center/pop-culture-halloween-costume-submissions.html
4	https://www.nytimes.com/aponline/2019/10/27/world/europe/ap-eu-germany-frankenstein-castle.html
5	https://www.nytimes.com/aponline/2019/10/24/us/ap-us-creepy-dolls.html
6	https://www.nytimes.com/2019/10/24/arts/halloween-tips-horror-enthusiasts.html
7	https://www.nytimes.com/aponline/2019/10/17/sports/ncaafootball/ap-fbc-pick-six-key-games.html
8	https://www.nytimes.com/2019/10/27/briefing/impeachment-california-halloween.html
9	https://www.nytimes.com/2019/05/22/obituaries/debra-hill-overlooked.html
10	https://www.nytimes.com/2019/05/25/arts/television/whats-on-tv-saturday-halloween-and-the-perfection.html

pull snippet from NYT_docs

```
NYT_snippet <- NYT_docs$snippet
NYT_snippet %>%
  kable(col.names="Snippet",row.names=1:10) %>%
  kable_styling(c("striped", "bordered"))
```

	Snippet
1	"You're in a community that is predominately black, yet you don't know what the noose symbolizes?" a Brooklyn parent asked.
2	A brief history of wearing the zeitgeist, from the Rubik's Cube to Minions.
3	The older, the better.
4	Medieval Frankenstein Castle has become a favorite haunt for Germans celebrating Halloween, a tradition that's grown increasingly popular in continental Eu
5	A Minnesota museum has turned its creepiest dolls loose just in time for Halloween.
6	Writers, directors and other creators share recommendations for how to spend the scariest night of the year.
7	Except for South Carolina's stunning overtime win at Georgia, there haven't been many results so far this season that figure to shape the College Football Pla
8	Here's what you need to know about the week's top stories.
9	Hill rose through Hollywood's ranks, setting an example as a successful Hollywood producer at a time when there were few women in the industry.
10	Jamie Lee Curtis returns for a final showdown in the "Halloween" reboot. And Allison Williams stars in a disturbing thriller on Netflix.

pull lead_paragraph from NYT_docs

```
NYT_lead <- NYT_docs$lead_paragraph
NYT_lead %>%
  kable(col.names="Lead Paragraph",row.names=1:10) %>%
  kable_styling(c("striped", "bordered"))
```

	Lead Paragraph
1	Depictions of children hanging from nooses were displayed across the street from an elementary school in Brooklyn. An empty noose swung from a home on L...
2	The high heels were on the move. Dozens of New York teachers marched through the streets of Greenwich Village on Oct. 31, 1986, wrapped in fabric stilletto...
3	In 2015, there was Pizza Rat. In 2016, David S. Pumpkins. And in 2017? Offred from "The Handmaid's Tale." The pop-culture Halloween costume has been e...
4	FRANKENSTEIN CASTLE, Germany — Medieval Frankenstein Castle has become a favorite haunt for Germans celebrating Halloween, a tradition that's gro...
5	ROCHESTER, Minn. — A Minnesota museum has turned its creepiest dolls loose just in time for Halloween.
6	You'd think that Elvira, Mistress of the Dark, would have plenty of advice on how to spend Halloween. After all, she's made a career out of highlighting the s...
7	Except for South Carolina's stunning overtime win at Georgia, there haven't been many results so far this season that figure to shape the College Football Pla...
8	(Want to get this briefing by email? Here's the sign-up.)
9	Overlooked is a series of obituaries about remarkable people whose deaths, beginning in 1851, went unreported in The Times.
10	HALLOWEEN (2018) 8 p.m. on HBO; stream on HBO platforms. Forty years (and nine sequels and remakes) later, John Carpenter's classic slasher film got...

pull abstract from NYT_docs

```
NYT_abstract <- NYT_docs$abstract
NYT_abstract %>%
  kable(col.names="Abstract",row.names=1:10) %>%
  kable_styling(c("striped", "bordered"))
```

	Abstract
1	"You're in a community that is predominately black, yet you don't know what the noose symbolizes?" a Brooklyn parent asked.
2	A brief history of wearing the zeitgeist, from the Rubik's Cube to Minions.
3	The older, the better.
4	Medieval Frankenstein Castle has become a favorite haunt for Germans celebrating Halloween, a tradition that's grown increasingly popular in continental Eu...
5	A Minnesota museum has turned its creepiest dolls loose just in time for Halloween.
6	Writers, directors and other creators share recommendations for how to spend the scariest night of the year.
7	Except for South Carolina's stunning overtime win at Georgia, there haven't been many results so far this season that figure to shape the College Football Pla...
8	Here's what you need to know about the week's top stories.
9	Hill rose through Hollywood's ranks, setting an example as a successful Hollywood producer at a time when there were few women in the industry.
10	Jamie Lee Curtis returns for a final showdown in the "Halloween" reboot. And Allison Williams stars in a disturbing thriller on Netflix.

fashion my own data frame

```
MY_NYT_df <- data.frame(NYT_web_url, NYT_snippet, NYT_lead, NYT_abstract)
MY_NYT_df %>% kable(row.names=1:10) %>%
  column_spec(.,column = 1, width = "10em") %>%
  kable_styling(c("striped", "bordered"))
```

	NYT_web_url	NYT_snippet
1	https://www.nytimes.com/2019/10/25/nyregion/nooses-blackface-halloween-decorations.html	"You're in a community
2	https://www.nytimes.com/2019/10/24/us/pop-culture-halloween-costumes.html	A brief history of wearin
3	https://www.nytimes.com/2019/10/11/reader-center/pop-culture-halloween-costume-submissions.html	The older, the better.
4	https://www.nytimes.com/aponline/2019/10/27/world/europe/ap-eu-germany-frankenstein-castle.html	Medieval Frankenstein C
5	https://www.nytimes.com/aponline/2019/10/24/us/ap-us-creepy-dolls.html	A Minnesota museum ha
6	https://www.nytimes.com/2019/10/24/arts/halloween-tips-horror-enthusiasts.html	Writers, directors and o
7	https://www.nytimes.com/aponline/2019/10/17/sports/ncaafootball/ap-fbc-pick-six-key-games.html	Except for South Caroli
8	https://www.nytimes.com/2019/10/27/briefing/impeachment-california-halloween.html	Here's what you need to
9	https://www.nytimes.com/2019/05/22/obituaries/debra-hill-overlooked.html	Hill rose through Hollyw
10	https://www.nytimes.com/2019/05/25/arts/television/whats-on-tv-saturday-halloween-and-the-perfection.html	Jamie Lee Curtis return