

HW 12

Jaquelin Martinez

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IPA FUNCTIONS

```
library(httr, quietly = T)

setwd("C:/Users/Jaquelin Martinez/Desktop/MATH 110/hw 12/Martinez")

#I made both newspaper api key and google api key global objects
globo_api_key <- "82928f3a320a4614b4e9bef5ba051b69"
google_api_key <- "AIzaSyA6BWicoLRoK3doX7oyNzs5YMEzxcg8Q47A"

#this function helps you construct a url for your newspaper
search_newspaper_url <- function(globo_key, word) {
  base <- "https://newsapi.org/v2/everything?q="
  query <- word
  sort <- "&sortBy=relevancy"
  mid_base<- "&sources=globo&apiKey="
  key <- globo_key
  url <- paste(base,query,sort,mid_base,key, sep="")
  return(url)
}

#this function helps you access the newspaper using the url function
#I did this here, so I would only have to insert my url in the following
functions
access_newspaper <- function (url) {

  x <- httr::GET(url=url)
  x <- jsonlite::fromJSON(rawToChar(x$content))
  return(x)
}

#this function will help you translate text of the ith title in the results
translate_text <- function(url, google_api, i) {
  newspaper <- access_newspaper(url)

  text <- unlist(newspaper$articles$title)
  text <- text[i]
  source <- "pt"
```

```

target <- "en"

body <- paste("{",
              "'q':", text, "'",
              "'source':", source, "'",
              "'target':", target, "'",
              "'format':'text'",
              "}", sep="")

base <- "https://translation.googleapis.com/language/translate/v2?key="
url <- paste(base, google_api, sep="")
x <- httr::POST(url, body = body)
x <- jsonlite::fromJSON(rawToChar(x$content))
out <- x$data$translations$translatedText

return(out)
}

#this function will help you turn your translated text into speech
text_to_speech <- function(url, google_api, i) {
  text <- translate_text(url, google_api, i)

  input <- paste("'input':{'text':", text, "}'", sep="")
  voice <- "'voice':{'languageCode':'en-AU','name':'en-AU-Standard-A','ssmlGender':'FEMALE'}"
  output <- "'audioConfig':{'audioEncoding':'MP3'}"

  s_body <- paste("{", input, ",", voice, ",", output, "}", sep="")

  base_url <- "https://texttospeech.googleapis.com/v1/text:synthesize?key="
  url <- paste(base_url, google_api, sep="")

  x <- httr::POST(url, body = s_body)
  x <- jsonlite::fromJSON(rawToChar(x$content))

  Sys.setenv(output_string=x$audioContent)
  audio <- x$audioContent

  con <- file("sound.txt", "w")
  writeLines(audio, con = con)
  close(con)

  shell("certutil -decode sound.txt sound.mp3")
  shell("start sound.mp3")
}

```

SOURCING MY CODE AND SHOWING OUTPUT FOR FUNCTIONS

```
source("globo_api.R")

search_newspaper_url(globo_api_key, "Bolsonaro")

## [1]
"https://newsapi.org/v2/everything?q=Bolsonaro&sortBy=relevancy&sources=globo
&apiKey=82928f3a320a4614b4e9bef5ba051b69"

#I created an object, so I wouldn't have to continue writing my search word
and newspaper api again and again in the functions
url <- search_newspaper_url(globo_api_key, "Bolsonaro")

access_newspaper(url)$articles[1,]

## source.id source.name author
## 1 globo Globo NA
##
title
## 1 'Não interessa se vai ter status de ministério', diz Bolsonaro sobre
pasta do Trabalho
##
description
## 1 O futuro do Ministério do Trabalho continua sendo a grande incógnita
em relação ao governo do presidente eleito Jair Bolsonaro (PSL). Nesta
quarta-feira, Bolsonaro disse que a legislação trabalhista será
preservada, e frisou que ainda não está... Leia mais
##
url
## 1 https://oglobo.globo.com/economia/nao-interessa-se-vai-ter-status-de-
ministerio-diz-bolsonaro-sobre-pasta-do-trabalho-23233723
##
urlToImage
## 1 https://extra.globo.com/incoming/23234247-00f-009/w976h550-
PROP/presidente.jpg
## publishedAt
## 1 2018-11-14T13:51:53Z
##
content
## 1 O futuro do Ministério do Trabalho continua sendo a grande incógnita
em relação ao governo do presidente eleito Jair Bolsonaro (PSL). Nesta
quarta-feira, Bolsonaro disse que a legislação trabalhista será
preservada, e frisou que ainda não está definido se a pá
[+2899 chars]

translate_text(url, google_api_key, 3)

## [1] "Roberto Campos Neto will lead the BC and Mansueto remains in the
Treasury in the next government"

text_to_speech(url, google_api_key, 3)
```