

# Code - DART.R

LearningSpoonsR

2018-05-15

# KMA vs DART

# KMA

```
# 0. setup environment
source("LSR.R")
activate(c("dplyr", "tidyverse", "jsonlite"))

# 1. setup API
svc_key <- paste0(
  "uEID6no5W0eFLEu%2FYZpdjKHQVrE2HtFEig4lJ7iHWiE5wGS1L3RvmusPMDkumoj",
  "8f%2BSffvPYW0%2B5xXu%2FrQ%2Bvzg%3D%3D")
today   <- gsub("-", "", Sys.Date())
url     <- paste0(
  "http://news2.kma.go.kr/service/SecndSrtpdFrcstInfoService2",
  "/ForecastSpaceData")

# 2. get maxPage
fields  <- c("ServiceKey", "base_date", "base_time", "nx", "ny", "_type")
values  <- c(svc_key, today, "0800", "60", "127", "json")
request <- paste(fields, values, sep = "=") %>% paste(collapse="&")
query   <- paste0(url, "?", request)
raw     <- readLines(query, warn = "F", encoding = "UTF-8") %>% fromJSON()
maxPage <- ceiling(raw$response$body$totalCount/raw$response$body$numOfRows)
```

```
# 3. collect all pages
fields <- c("ServiceKey", "base_date", "base_time", "nx", "ny", "_type", "pageNo")
dataset <- data.frame()
for (i in 1:maxPage) {
  values_i <- c(svc_key, today, "0800", "60", "127", "json", i)
  request_i <- paste(fields, values_i, sep = "=") %>% paste(collapse="&")
  query_i <- paste0(url, "?", request_i)
  raw_i <- readLines(query_i, warn = "F", encoding = "UTF-8") %>% fromJSON()
  dataset_i <- raw_i$response$body$items$item
  dataset <- rbind(dataset, dataset_i)
}

# 4. deliver output
# print(dataset)
```

# DART

```
loadDART <- function(start_dt = Sys.Date()-3, end_dt = Sys.Date()-1) {  
  # loadDART()  
  # 0. setup environment  
  source("LSR.R")  
  activate("dplyr", "jsonlite")  
  
  # 1. setup API  
  svc_key <- "f96deaa9b5f380145bc2d57eddc9b8b0a8c358b4"  
  url <- "http://dart.fss.or.kr/api/search.json"  
  
  # 2. get maxPage  
  fields <- c("auth", "start_dt", "end_dt", "page_set")  
  values <- c(svc_key,  
              format(start_dt,"%Y%m%d"),  
              format(end_dt,"%Y%m%d"),  
              100)  
  request <- paste(fields, values, sep = "=") %>% paste(collapse="&")  
  query <- paste0(url, "?", request)  
  raw <- readLines(query, warn = "F", encoding = "UTF-8") %>% fromJSON()  
  maxPage <- raw$total_page
```

```
# 3. collect all pages
fields <- c(fields, "page_no")
dataset <- data.frame()
for (i in 1:maxPage) {
  values_i <- c(values, i)
  request_i <- paste(fields, values_i, sep = "=") %>% paste(collapse="&")
  query_i <- paste0(url, "?", request_i)
  raw_i <- readLines(query_i, warn = "F", encoding = "UTF-8") %>% fromJSON()
  dataset_i <- raw_i$list
  dataset <- rbind(dataset, dataset_i)
}

# 4. deliver output
return(dataset)
}

dartLookup <- function(dartObj, keyword) {
  # LoadDART() %>% dartLookup("합병")
  selects <- which(grepl(keyword, dartObj[,4]))
  deliver <- dartObj[selects, c(7,2,4,3,6,5)]
  return(data.frame(deliver, stringsAsFactors = FALSE))
}
```

# **“Try $n=1,2,3$ , then generalize it” - Emanuel Derman**

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# KMA vs molit

# KMA

```
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svc_key <- paste0(
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  "%2B5xXu%2FrQ%2Bvzg%3D%3D")
today   <- gsub("-", "", Sys.Date())
url     <- paste0(
  "http://news2.kma.go.kr/service/SecndSrtpdFrcstInfoService2",
  "/ForecastSpaceData")

# 2. get maxPage
fields  <- c("ServiceKey", "base_date", "base_time", "nx", "ny", "_type")
values  <- c(svc_key, today, "0800", "60", "127", "json")
request <- paste(fields, values, sep = "=") %>% paste(collapse="&")
query   <- paste0(url, "?", request)
raw     <- readLines(query, warn = "F", encoding = "UTF-8") %>% fromJSON()
maxPage <- ceiling(raw$response$body$totalCount/raw$response$body$numOfRows)
```

```
# 3. collect all pages
fields <- c("ServiceKey", "base_date", "base_time", "nx", "ny", "_type", "pageNo")
dataset <- data.frame()
for (i in 1:maxPage) {
  values_i <- c(svc_key, today, "0800", "60", "127", "json", i)
  request_i <- paste(fields, values_i, sep = "=") %>% paste(collapse="&")
  query_i <- paste0(url, "?", request_i)
  raw_i <- readLines(query_i, warn = "F", encoding = "UTF-8") %>% fromJSON()
  dataset_i <- raw_i$response$body$items$item
  dataset <- rbind(dataset, dataset_i)
}

# 4. deliver output
# print(dataset)
```

# Molit

```
# 0. setup environment
options(stringsAsFactors = FALSE)
source("LSR.R")
activate("XML", "stringr", "tidyverse")

# 1. setup API
svc_key <- paste0("EeBjN2xdCzzcqHvef00rZXaycAim0uGpKxn0X72PY1UpkSZnifzIK1kx",
                  "Lm61XXaQ4pFxhbW%2F%2FZbmQDKFiAFNVA%3D%3D")
url      <- paste0("http://openapi.molit.go.kr:8081/OpenAPI_ToolInstallPackage/",
                  "service/rest/RTMSOJBJSvc/getRTMSDataSvcAptTrade")

# 2. get maxPage - One page is enough!

# 3. collect all data
fields <- c("LAWD_CD", "DEAL_YMD", "serviceKey")
values <- c("11110", "201712", svc_key) # Jongro-Gu
request <- paste(fields, values, sep = "=") %>% paste(collapse="&")
query   <- paste0(url, "?", request)
raw     <- xmlTreeParse(query, useInternalNodes = TRUE, encoding = "utf-8") %>%
  xmlRoot()
items  <- raw[['body']][['items']]
```

```
# XML is trickier than JSON! (Needs to collect from each item)
# No i-loop for page, because 1 page is enough.
# This j-loop is iterating item.
dataset <- data.frame()
for (j in 1:xmlSize(items)) {
  item    <- items[[j]] %>% xmlSApply(xmlValue)
  dataset <- rbind(dataset, as.vector(item))
}

# A little clean-up
colnames(dataset) <-
  c("price", "builtAt", "year", "dong", "aptName",
    "month", "day", "size", "address", "guCode", "floor")
dataset$price <- as.numeric(sub(",", "", dataset$price))
dataset[,c(2,3,6,8,11)] <- sapply(dataset[,c(2,3,6,8,11)], as.numeric)

# 4. deliver output
# print(head(dataset))
```

```
# 4. deliver output
```

```
head(dataset)
```

##	price	builtAt	year	dong	aptName	month	day	size
## 1	91000	2000	2017	청운동	청운현대	12	11~20	129.76
## 2	54000	1973	2017	필운동	사직파크맨션	12	1~10	99.17
## 3	140000	2008	2017	사직동	광화문풍림스페이스본(9-0)	12	1~10	158.99
## 4	89900	2008	2017	사직동	광화문풍림스페이스본(9-0)	12	1~10	121.37
## 5	111000	2008	2017	사직동	광화문풍림스페이스본(9-0)	12	1~10	158.99
## 6	95000	2008	2017	사직동	광화문풍림스페이스본(9-0)	12	11~20	108.07
##	address	guCode	floor					
## 1	56-45	11110	5					
## 2	142	11110	5					
## 3	9	11110	12					
## 4	9	11110	2					
## 5	9	11110	1					
## 6	9	11110	6					

- 메뉴얼
- [https://www.data.go.kr/commonUser/fileDownload.do?atchFileId=FILE\\_000000001429779&fileDetailSn=0](https://www.data.go.kr/commonUser/fileDownload.do?atchFileId=FILE_000000001429779&fileDetailSn=0)
- 구별 코드 조회
- <http://code.mogaha.go.kr/jsp/stdcode/regCodeL.jsp>