STAT 478 Project

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```
# check if `tidyr` package is installed; otherwise, install
# and load if 'tidyr' is absent
if (!require("tidyr")) install.packages("tidyr", repos = "https://cloud.r-project.org")

# load libraries

# rename
library(dplyr)

# library(reshape2) library(ggplot2) library(imputeTS)
# library(zoo) library(TSA)
```

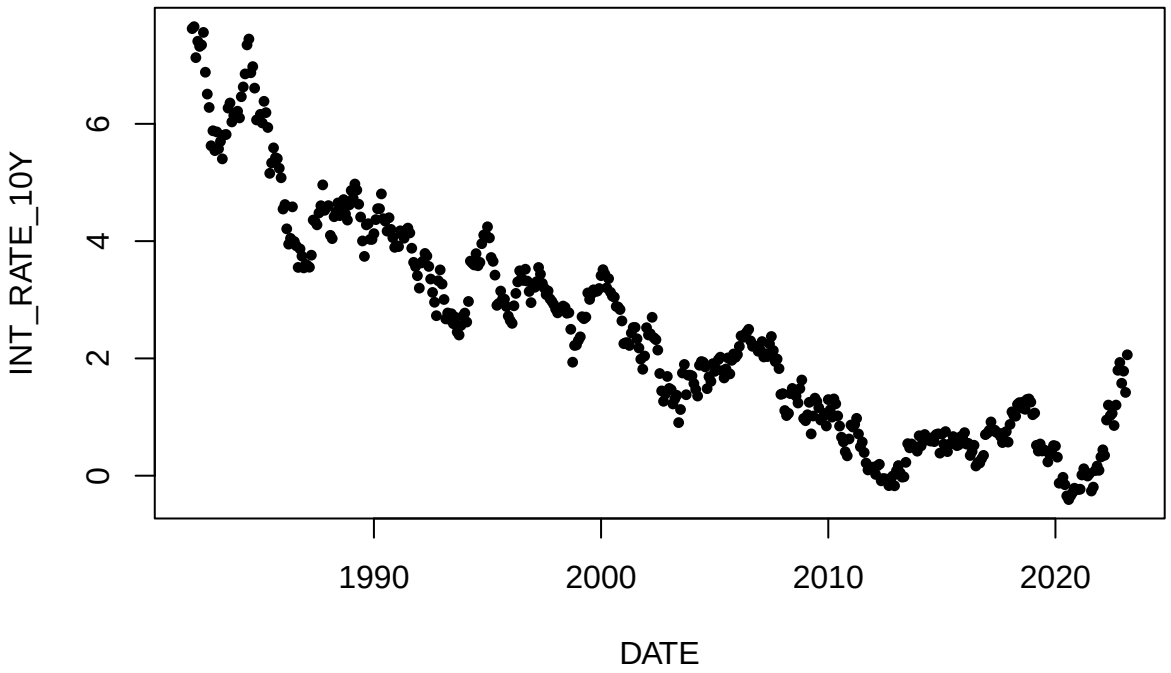
```
# read in data set
int_rate <- read.csv("RIRA10Y.csv")

# rename columns for easier data manipulation
int_rate <- int_rate %>%
    rename(INT_RATE_10Y = REAINTRATREARAT10Y)

# convert date to type(date)
int_rate <- int_rate %>%
    mutate(DATE = as.Date(DATE, sep = "-", "%Y-%m-%d"))
str(int_rate)
```

```
## 'data.frame':    495 obs. of  2 variables:
##  $ DATE        : Date, format: "1982-01-01" "1982-02-01" "1982-03-01" ...
##  $ INT_RATE_10Y: num  7.62 7.66 7.13 7.41 7.32 ...
```

```
plot(INT_RATE_10Y ~ DATE, int_rate, pch = 16, cex = 0.75)
```



1. Problem definition
2. Data description
3. Data Analysis
4. Model specification and fitting
5. Model validation and diagnostics
6. Forecasting