DATA 624 - PROJECT 1

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# Project 1

rm(list = ls())  
library(knitr)  
library(ggplot2)  
library(tidyr)  
library(dplyr)  
library(tseries)  
library(forecast)  
library(lubridate)  
library(tidyverse)

## Load Data

Load all the data for all 3 parts from github in the interest of reproducibility.

temp\_file <- tempfile(fileext = ".xlsx")  
download.file(url = "https://github.com/omerozeren/DATA624/blob/master/Project1/ATM624Data.xlsx?raw=true",   
 destfile = temp\_file,   
 mode = "wb",   
 quiet = TRUE)  
atm\_data <- readxl::read\_excel(temp\_file,skip=0,col\_types = c("date","text","numeric"))  
download.file(url = "https://github.com/omerozeren/DATA624/blob/master/Project1/ResidentialCustomerForecastLoad-624.xlsx?raw=true",   
 destfile = temp\_file,   
 mode = "wb",   
 quiet = TRUE)  
power\_data <- readxl::read\_excel(temp\_file,skip=0,col\_types = c("numeric","text","numeric"))  
download.file(url = "https://github.com/omerozeren/DATA624/blob/master/Project1/Waterflow\_Pipe1.xlsx?raw=true",   
 destfile = temp\_file,   
 mode = "wb",   
 quiet = TRUE)  
water1\_data <- readxl::read\_excel(temp\_file,skip=0,col\_types = c("date","numeric"))  
download.file(url = "https://github.com/omerozeren/DATA624/blob/master/Project1/Waterflow\_Pipe2.xlsx?raw=true",   
 destfile = temp\_file,   
 mode = "wb",   
 quiet = TRUE)  
water2\_data <- readxl::read\_excel(temp\_file,skip=0,col\_types = c("date","numeric"))