Bike Sharing Analysis

2024-06-24

Read the Data

# Load the dataset  
day <- read.csv("/Users/Sour/RClassTools/day.csv")  
  
# Display a summary of the dataset  
summary(day)

## instant dteday season yr   
## Min. : 1.0 Length:731 Min. :1.000 Min. :0.0000   
## 1st Qu.:183.5 Class :character 1st Qu.:2.000 1st Qu.:0.0000   
## Median :366.0 Mode :character Median :3.000 Median :1.0000   
## Mean :366.0 Mean :2.497 Mean :0.5007   
## 3rd Qu.:548.5 3rd Qu.:3.000 3rd Qu.:1.0000   
## Max. :731.0 Max. :4.000 Max. :1.0000   
## mnth holiday weekday workingday   
## Min. : 1.00 Min. :0.00000 Min. :0.000 Min. :0.000   
## 1st Qu.: 4.00 1st Qu.:0.00000 1st Qu.:1.000 1st Qu.:0.000   
## Median : 7.00 Median :0.00000 Median :3.000 Median :1.000   
## Mean : 6.52 Mean :0.02873 Mean :2.997 Mean :0.684   
## 3rd Qu.:10.00 3rd Qu.:0.00000 3rd Qu.:5.000 3rd Qu.:1.000   
## Max. :12.00 Max. :1.00000 Max. :6.000 Max. :1.000   
## weathersit temp atemp hum   
## Min. :1.000 Min. :0.05913 Min. :0.07907 Min. :0.0000   
## 1st Qu.:1.000 1st Qu.:0.33708 1st Qu.:0.33784 1st Qu.:0.5200   
## Median :1.000 Median :0.49833 Median :0.48673 Median :0.6267   
## Mean :1.395 Mean :0.49538 Mean :0.47435 Mean :0.6279   
## 3rd Qu.:2.000 3rd Qu.:0.65542 3rd Qu.:0.60860 3rd Qu.:0.7302   
## Max. :3.000 Max. :0.86167 Max. :0.84090 Max. :0.9725   
## windspeed casual registered cnt   
## Min. :0.02239 Min. : 2.0 Min. : 20 Min. : 22   
## 1st Qu.:0.13495 1st Qu.: 315.5 1st Qu.:2497 1st Qu.:3152   
## Median :0.18097 Median : 713.0 Median :3662 Median :4548   
## Mean :0.19049 Mean : 848.2 Mean :3656 Mean :4504   
## 3rd Qu.:0.23321 3rd Qu.:1096.0 3rd Qu.:4776 3rd Qu.:5956   
## Max. :0.50746 Max. :3410.0 Max. :6946 Max. :8714

Data Preparation

# Convert dteday to Date type  
day$dteday <- ymd(day$dteday)  
  
# Extract month names  
day$month\_name <- month(day$dteday, label = TRUE, abbr = TRUE)  
  
# Ensure month\_name is a character type  
day$month\_name <- as.character(day$month\_name)  
  
# Display the first few rows to verify the new column  
head(day)

## instant dteday season yr mnth holiday weekday workingday weathersit  
## 1 1 2011-01-01 1 0 1 0 6 0 2  
## 2 2 2011-01-02 1 0 1 0 0 0 2  
## 3 3 2011-01-03 1 0 1 0 1 1 1  
## 4 4 2011-01-04 1 0 1 0 2 1 1  
## 5 5 2011-01-05 1 0 1 0 3 1 1  
## 6 6 2011-01-06 1 0 1 0 4 1 1  
## temp atemp hum windspeed casual registered cnt month\_name  
## 1 0.344167 0.363625 0.805833 0.1604460 331 654 985 Jan  
## 2 0.363478 0.353739 0.696087 0.2485390 131 670 801 Jan  
## 3 0.196364 0.189405 0.437273 0.2483090 120 1229 1349 Jan  
## 4 0.200000 0.212122 0.590435 0.1602960 108 1454 1562 Jan  
## 5 0.226957 0.229270 0.436957 0.1869000 82 1518 1600 Jan  
## 6 0.204348 0.233209 0.518261 0.0895652 88 1518 1606 Jan