r

2024-07-10

# Load necessary libraries  
library(readxl)

## Warning: package 'readxl' was built under R version 4.4.1

library(dplyr)

## Warning: package 'dplyr' was built under R version 4.4.1

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

library(ggplot2)

## Warning: package 'ggplot2' was built under R version 4.4.1

# Load the data  
file\_path <- "C:\\Users\\ASUS\\Downloads\\r programming (1).xlsx"  
coffee\_data <- read\_excel(file\_path, sheet = "coffee dataset.excel xs")

# Convert date and datetime columns to proper date-time formats  
coffee\_data$date <- as.Date(coffee\_data$date)  
coffee\_data$datetime <- as.POSIXct(coffee\_data$datetime, format="%H:%M:%OS")

# 1. Summary Statistics for the amount spent (money)  
summary\_stats <- summary(coffee\_data$money)  
print(summary\_stats)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 23.02 28.90 34.50 34.14 37.72 40.00

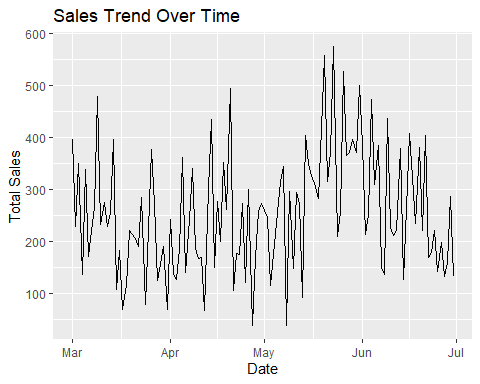
# 2. Transaction Count by Coffee Type  
transaction\_count <- coffee\_data %>%  
 group\_by(coffee\_name) %>%  
 summarise(count = n())  
print(transaction\_count)

## # A tibble: 8 × 2  
## coffee\_name count  
## <chr> <int>  
## 1 Americano 133  
## 2 Americano with Milk 203  
## 3 Cappuccino 164  
## 4 Cocoa 26  
## 5 Cortado 85  
## 6 Espresso 35  
## 7 Hot Chocolate 63  
## 8 Latte 187

# 3. Total Sales by Coffee Type  
total\_sales <- coffee\_data %>%  
 group\_by(coffee\_name) %>%  
 summarise(total\_sales = sum(money))  
print(total\_sales)

## # A tibble: 8 × 2  
## coffee\_name total\_sales  
## <chr> <dbl>  
## 1 Americano 3786.  
## 2 Americano with Milk 6738.  
## 3 Cappuccino 6254.  
## 4 Cocoa 996.  
## 5 Cortado 2423.  
## 6 Espresso 827.  
## 7 Hot Chocolate 2417.  
## 8 Latte 7152.

# 4. Sales Trend Over Time  
sales\_trend <- coffee\_data %>%  
 group\_by(date) %>%  
 summarise(daily\_sales = sum(money))  
  
ggplot(sales\_trend, aes(x = date, y = daily\_sales)) +  
 geom\_line() +  
 labs(title = "Sales Trend Over Time", x = "Date", y = "Total Sales")



```