

Lab 01 Week 05 Worksheet

R Functions Glossary

This glossary provides an overview of key R functions used in **Week 5 Lab**, explaining their **purpose** and **general use** in handling time series data.

1. Downloading Data

```
tq_get(symbol, get = "data_source", from = "YYYY-MM-DD", to = "YYYY-MM-DD")
```

Purpose: Retrieves time series data from FRED, Yahoo Finance, or other sources.

Example:

```
data <- tq_get("AAPL", get = "stock.prices", from = "2020-01-01", to = "2024-02-28")
```

2. Handling Dates

```
as.numeric(Sys.Date())
```

Purpose: Converts the current date into a numeric value based on the R epoch (January 1, 1970).

Example:

```
as.numeric(Sys.Date())
```

```
ymd("YYYY-MM-DD")
```

Purpose: Converts a character string into a date format.

Example:

```
date <- ymd("2024-02-28")
```

3. Modifying Data

```
mutate(dataframe, new_column = operation)
```

Purpose: Adds or transforms columns in a dataframe.

Example:

```
data <- mutate(data, price_change = price - lag(price))
```

`case_when()`

Purpose: Recodes values based on conditions.

Example:

```
data <- mutate(data, category = case_when(price > 100 ~ "High", TRUE ~ "Low"))
```

4. Exporting Data

`write_csv(dataframe, "filename.csv")`

Purpose: Saves a dataframe as a CSV file for use in Tableau.

Example:

```
write_csv(data, "time_series_data.csv")
```

Using This Glossary

- Reference this list while working through Week 5 Lab.
- Experiment with each function in R to understand how it works.
- Use piping (`%>%`) to combine multiple functions and streamline analysis.