Data Visualization Analysis

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1 Introduction

This tutorial is designed to help you learn data visualization analysis by providing simple and useful information in a way that is easy to follow and understand.

2 Preparation

In order to draw a chart, we need to include the required packages for visualization and dataset. For example, `ggplot2` package is for drawing charts and `gcookbook` is for using `pg_mean` dataset.

```
library(ggplot2)
library(gcookbook)
```

3 Bar chart

In this section, we will draw a bar chart using `pg_mean` dataset. The dataset has two columns: `group`, `weight`.

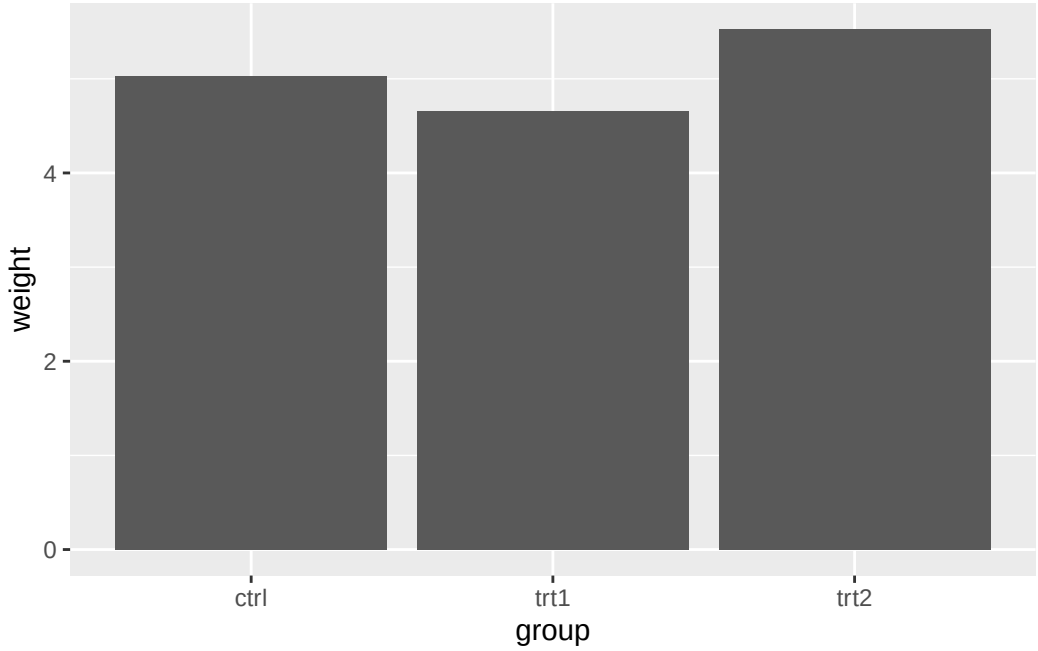
```
pg_mean
```

```
  group weight
1  ctrl  5.032
2  trt1  4.661
3  trt2  5.526
```

This dataset compares the weight across three groups:

- `ctrl`: Control group (baseline, weight = 5.032).
- `trt1`: Treatment 1 group (weight = 4.661).
- `trt2`: Treatment 2 group (weight = 5.526).

```
ggplot(pg_mean, aes(x = group, y = weight)) +
  geom_col()
```



It initializes a ggplot with the dataset `pg_mean`.

`aes(x = group, y = weight)` specifies the aesthetics:

- `x = group`: Assign the `group` variable to the x-axis (categorical data, such as `ctrl`, `trt1`, `trt2`).
- `y = weight`: Assign the `weight` variable to the y-axis (numerical data).

`geom_col()`:

- Adds a column geometry to the plot.
- `geom_col()` creates bars where the height of each bar corresponds to the value of weight for each group.