

# Visualization of HairEyeColor Dataset

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## Introduction

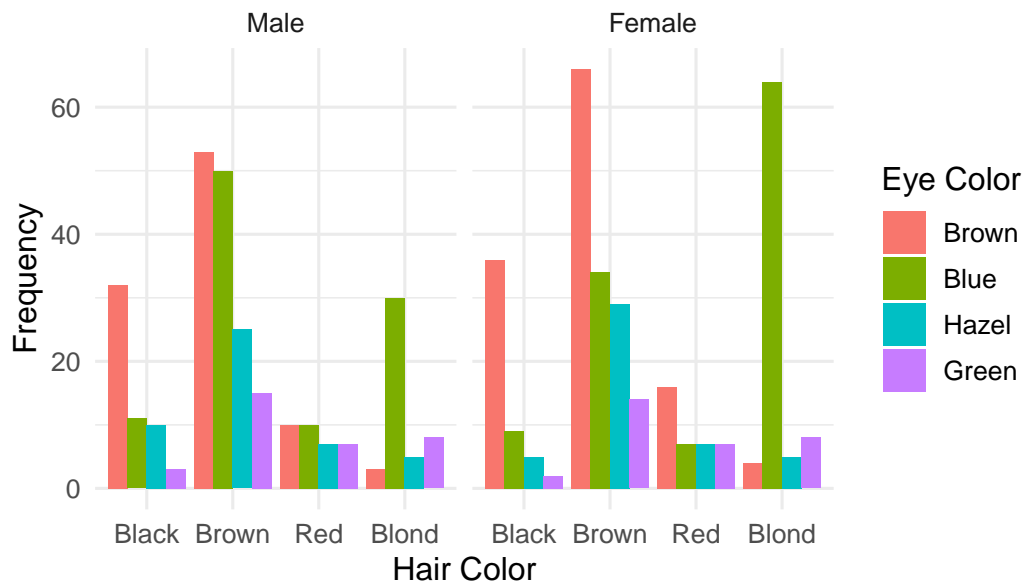
The `HairEyeColor` dataset from the R `datasets` package is a three-way contingency table. It records the frequencies of combinations of **Hair color**, **Eye color**, and **Sex**. This dataset is useful for exploring categorical distributions and group comparisons.

## Visualization

```
library(ggplot2)
df <- as.data.frame(HairEyeColor)

ggplot(df, aes(x = Hair, y = Freq, fill = Eye)) +
  geom_col(position = "dodge") +
  facet_wrap(~ Sex) +
  labs(
    title = "Hair Color × Eye Color × Sex",
    x = "Hair Color", y = "Frequency", fill = "Eye Color"
  ) +
  theme_minimal(base_size = 12)
```

## Hair Color × Eye Color × Sex



### Interpretation

The plot shows the joint distribution of hair and eye color, separated by sex.

Overall, **Brown hair with Brown or Blue eyes** is most frequent.

Males and females display broadly similar patterns, though slight differences exist.

This visualization highlights how categorical variables can be compared across groups.