

R markdown_diamonds

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2024-09-03

R markdown by ggplot2

data = diamonds

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2    3.5.1      v tibble    3.2.1
## v lubridate  1.9.3      v tidyr     1.3.1
## v purrr      1.0.2
```

```
## -- Conflicts ----- tidyverse_conflicts() --
```

```
## x dplyr::filter() masks stats::filter()
```

```
## x dplyr::lag()      masks stats::lag()
```

```
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(ggplot2)
```

preparation data

```
set.seed(09)
```

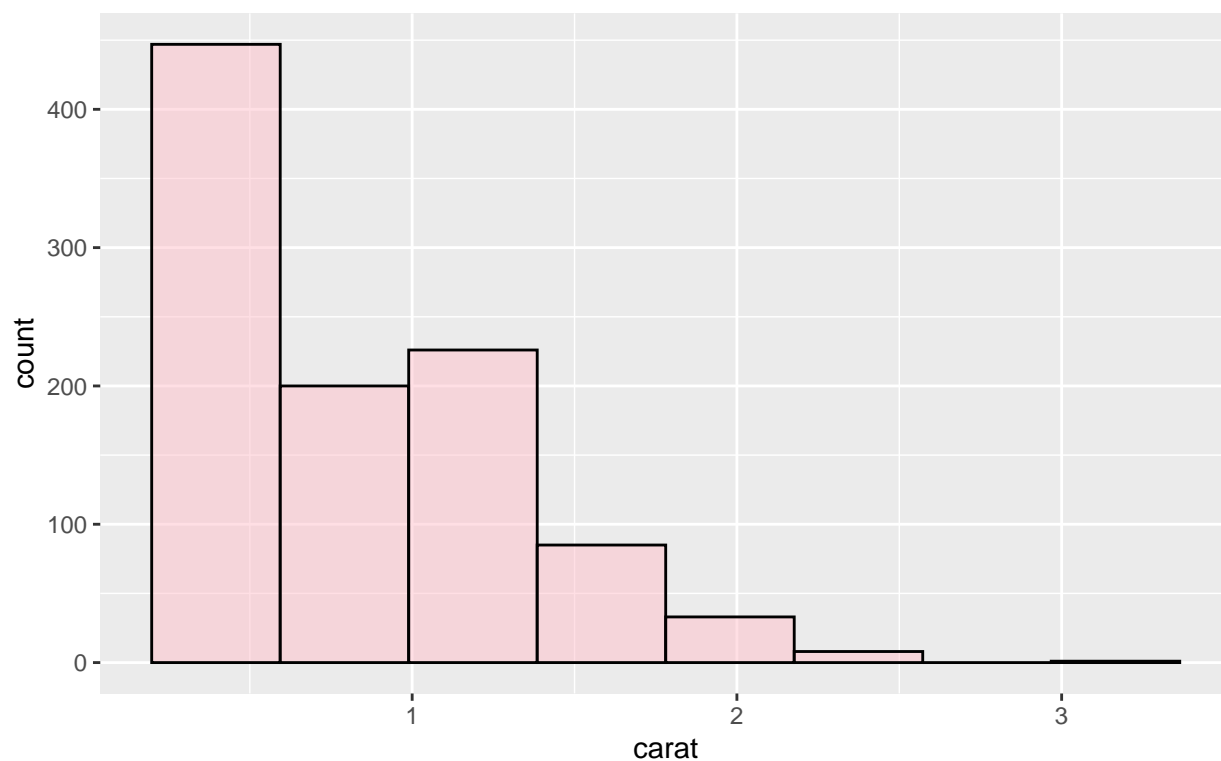
```
small_diamonds <- sample_n(diamonds, 1000)
```

chart1: carat histogram

Count weight of the diamond (0.2–5.01)(carat)

```
ggplot(small_diamonds, aes(carat)) +
  geom_histogram(bins = 8, fill = "pink", alpha = 0.5, color = "black") +
  labs(title = "chart1: Count weight of the diamond (0.2–5.01)(carat)",
       caption = "Source: Diamonds from ggplot2 packages")
```

chart1: Count weight of the diamond (0.2–5.01)(carat)



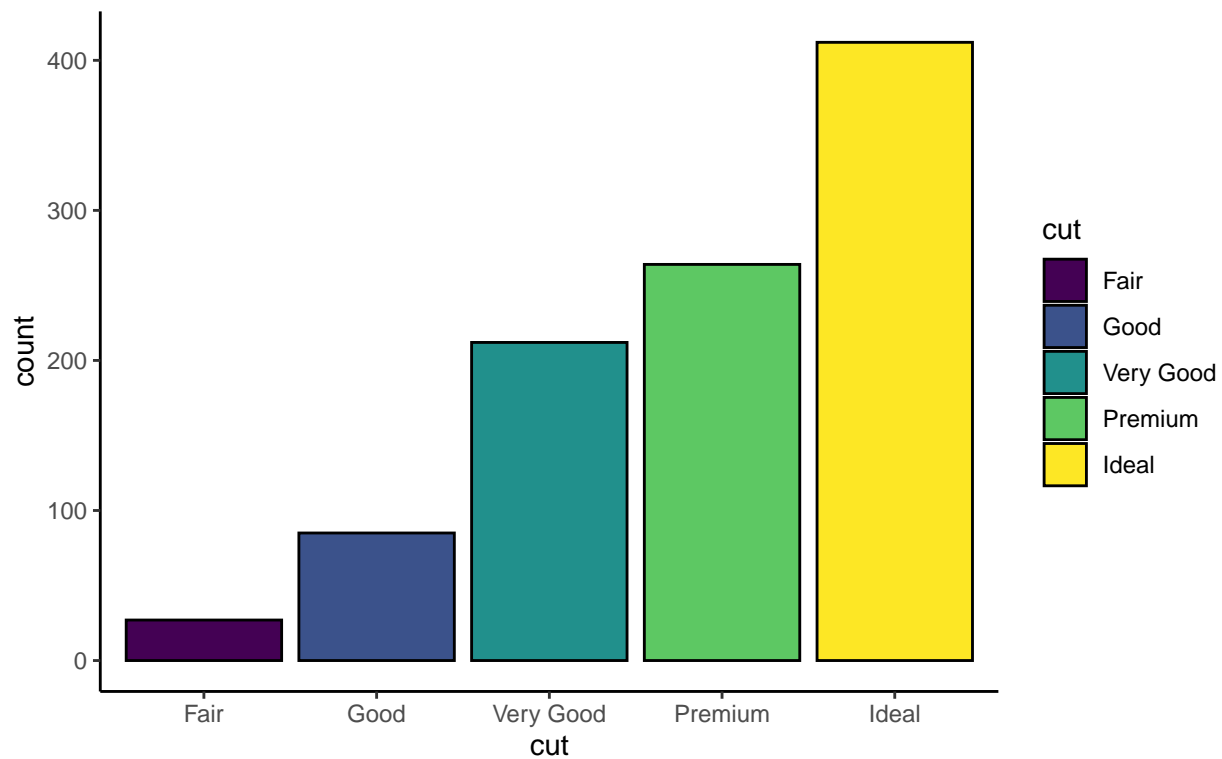
Source: Diamonds from ggplot2 packages

chart2: bar chart

Count quality of the cut (Fair, Good, Very Good, Premium, Ideal)

```
ggplot(small_diamonds, aes(cut, fill = cut)) +  
  geom_bar(color = "black") +  
  theme_classic() +  
  labs(title = "chart2: Count quality of the cut (Fair, Good, Very Good, Premium, Ideal)",  
        caption = "Source: Diamonds from ggplot2 packages")
```

chart2: Count quality of the cut (Fair, Good, Very Good, Premium, Ideal)



Source: Diamonds from ggplot2 packages

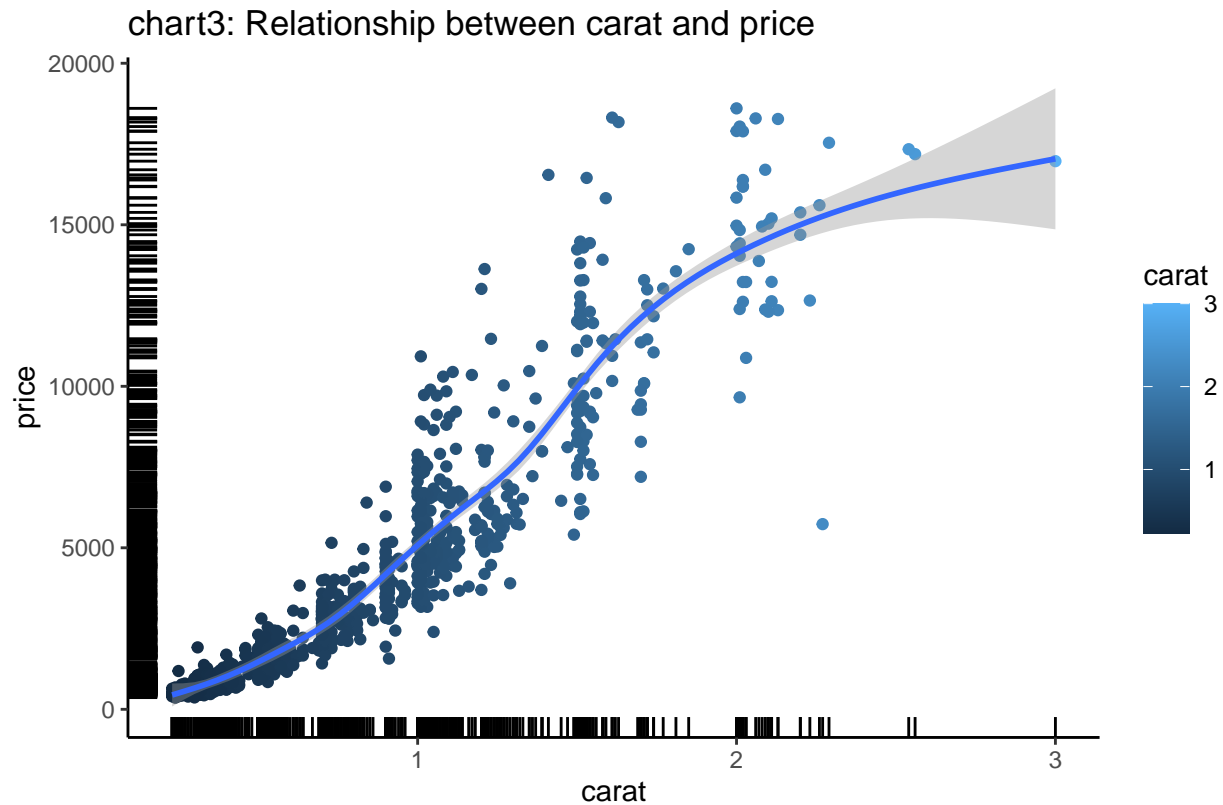
chart3: scatter plot

Relationship between carat and price

```
base <- ggplot(data = small_diamonds,
               mapping = aes(carat, price))

base +
  geom_point(mapping = aes(col = carat)) +
  geom_smooth() +
  geom_rug() +
  theme_classic() +
  labs(title = "chart3: Relationship between carat and price",
       caption = "Source: Diamonds from ggplot2 packages")
```

```
## `geom_smooth()` using method = 'gam' and formula = 'y ~ s(x, bs = "cs")'
```



Source: Diamonds from ggplot2 packages

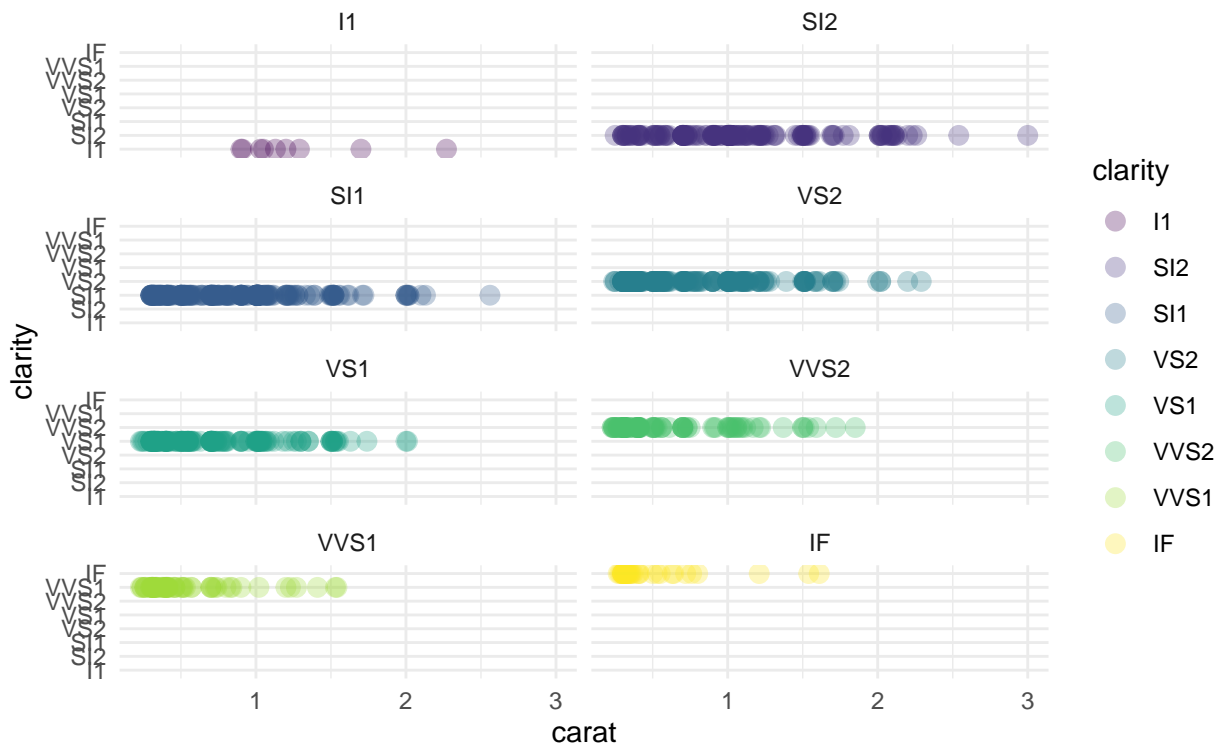
chart4: facet

Relationship between carat and clarity

```
base2 <- ggplot(data = small_diamonds,
               mapping = aes(carat, clarity, col = clarity))

base2 +
  geom_point(size = 3, alpha = 0.3) +
  theme_minimal() +
  facet_wrap(~clarity, ncol = 2) +
  labs(title = "chart4: Relationship between carat and clarity",
       caption = "Source: Diamonds from ggplot2 packages")
```

chart4: Relationship between carat and clarity



Source: Diamonds from ggplot2 packages

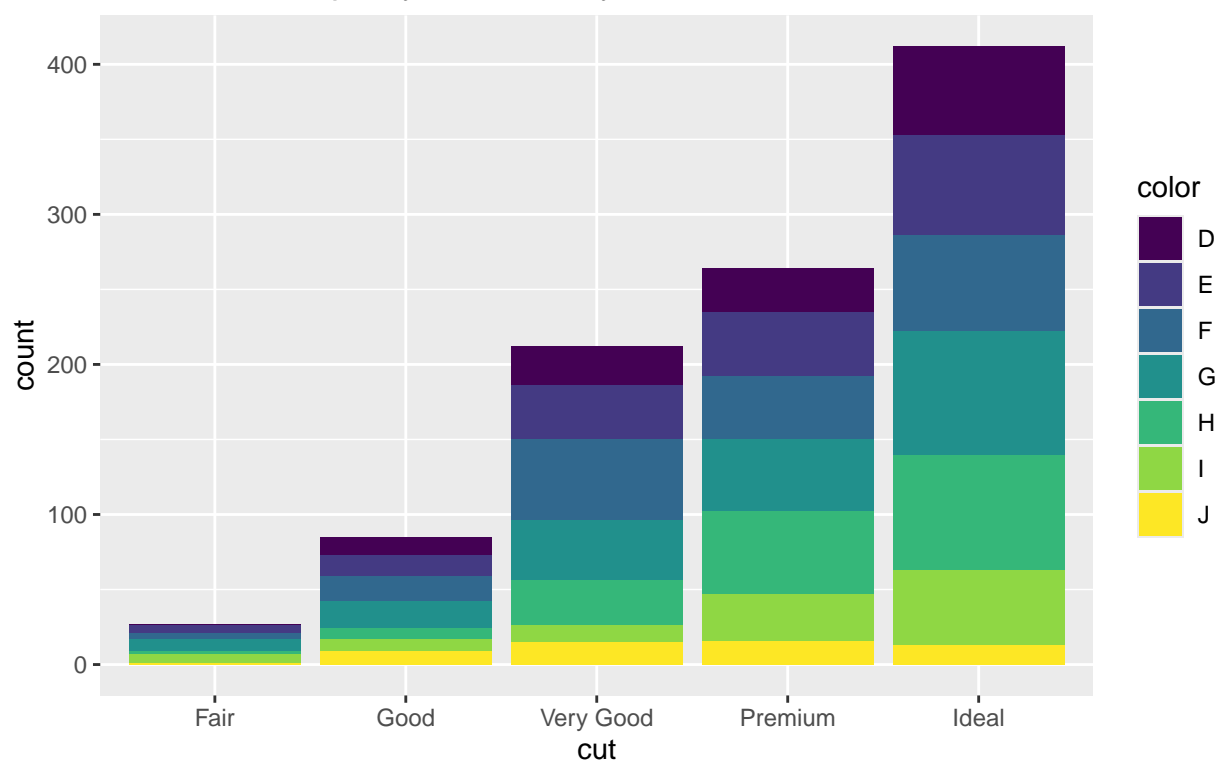
chart5: bar chart

Count quality of the cut by diamond colour

```
base3 <- ggplot(data = small_diamonds,
                 mapping = aes(cut, fill = color))

base3 +
  geom_bar() +
  labs(title = "chart5: Count quality of the cut by diamond colour",
        caption = "Source: Diamonds from ggplot2 packages")
```

chart5: Count quality of the cut by diamond colour



Source: Diamonds from ggplot2 packages