Data Visualization with ggplot

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```
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --
## v ggplot2 3.4.0      v purrr   0.3.5
## v tibble  3.1.8      v dplyr   1.0.10
## v tidyr   1.2.1      v stringr 1.4.1
## v readr   2.1.3      v forcats 0.5.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

Chart 1 : The Relationship between price and carat

```
set.seed(42)
ggplot(sample_n(diamonds,10000),
       aes(carat,price,color=cut ))+
  geom_point()+
 labs(
  title = "The Relationship between price and carat")+
   theme_minimal()
```

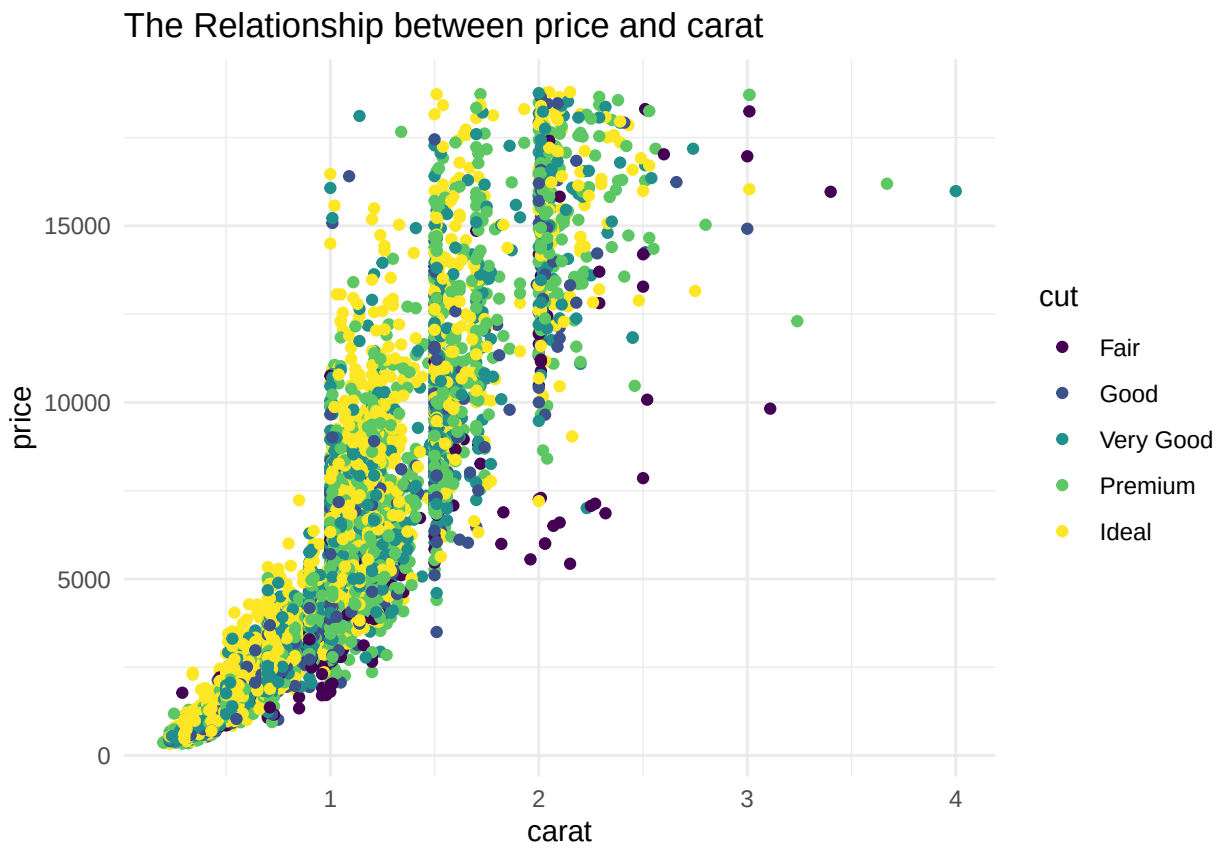


Chart 2 : The amount of diamonds for each cut

```
ggplot(diamonds,
       aes(color, fill = clarity))+
  geom_bar(position = "dodge")+
 labs(
  title = "The amounts of diamond color  ")+
   theme_minimal()
```

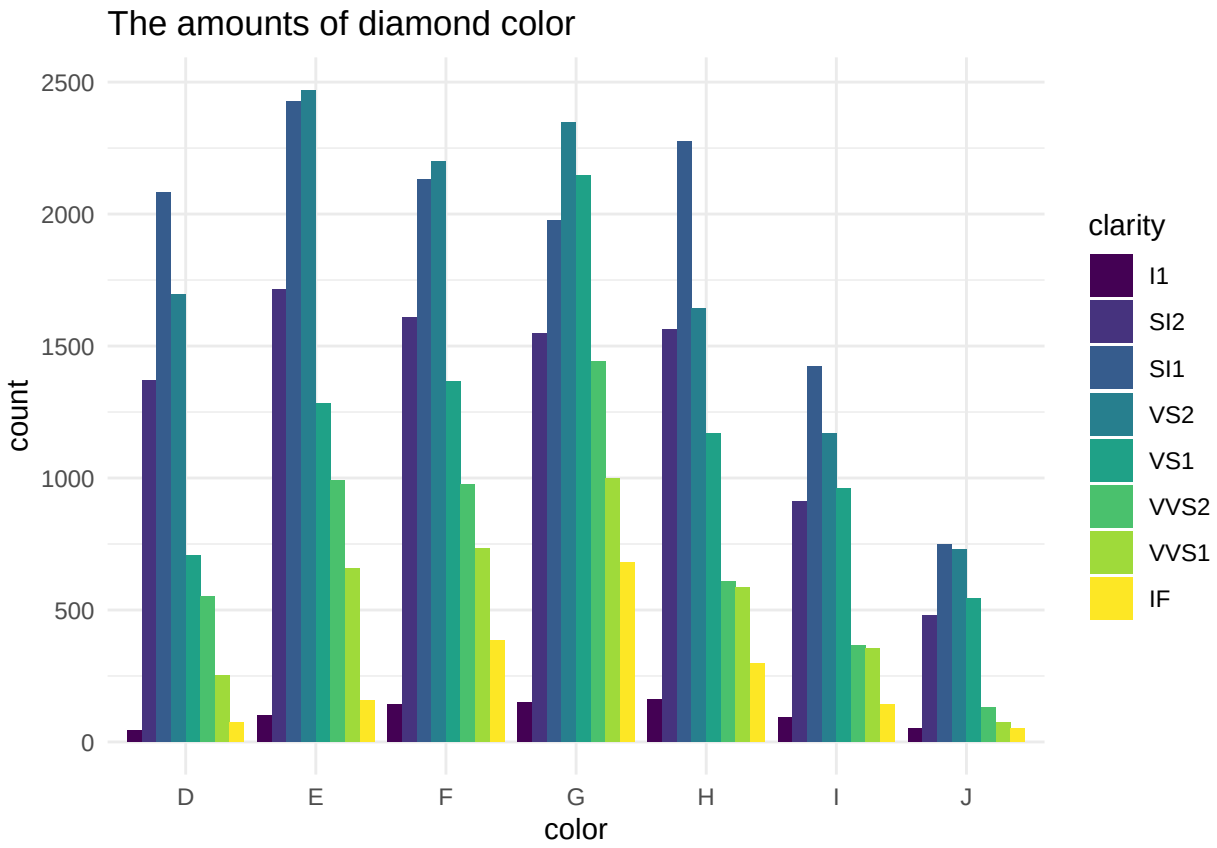


Chart 3 : The depth of each diamond cut

```
ggplot(diamonds, aes(x=cut,y=depth,
                color=cut,)) +
  labs(
  title = "The depth of each diamond cut",
  x ="Cut",
  y="Depth ",
    caption="Source:ggplot2") +
  geom_violin() +

  theme_minimal()
```

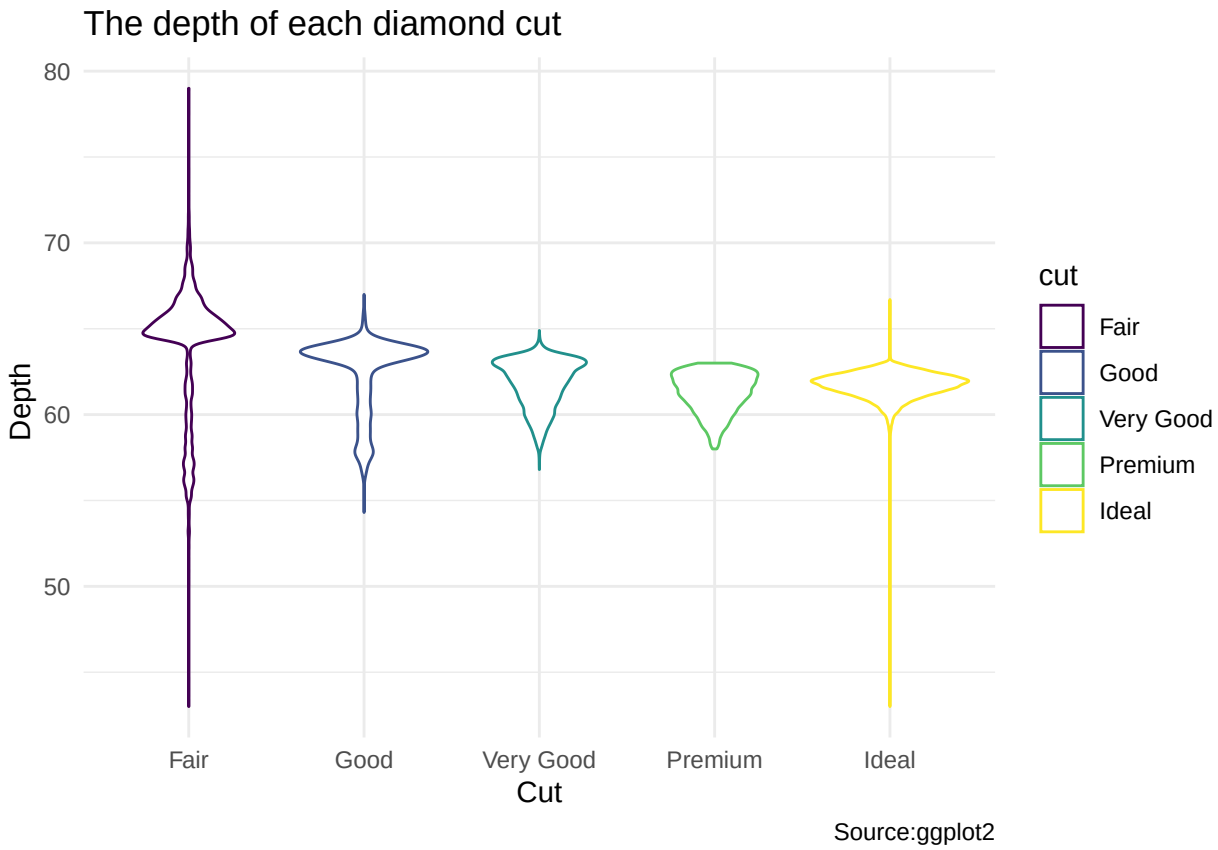


Chart 4 : The price of each diamond color

```
set.seed(25)
diamonds %>%
  sample_n(10000)  %>%
  ggplot( aes(color,price, color=color)) +
  labs(
  title = "The price of each diamond color",
  x ="color",
  y="price ",
    caption="Source:ggplot2")+
  geom_point(alpha=0.8)+
  geom_smooth()+
  theme_minimal()+
facet_grid(cut~clarity)
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```

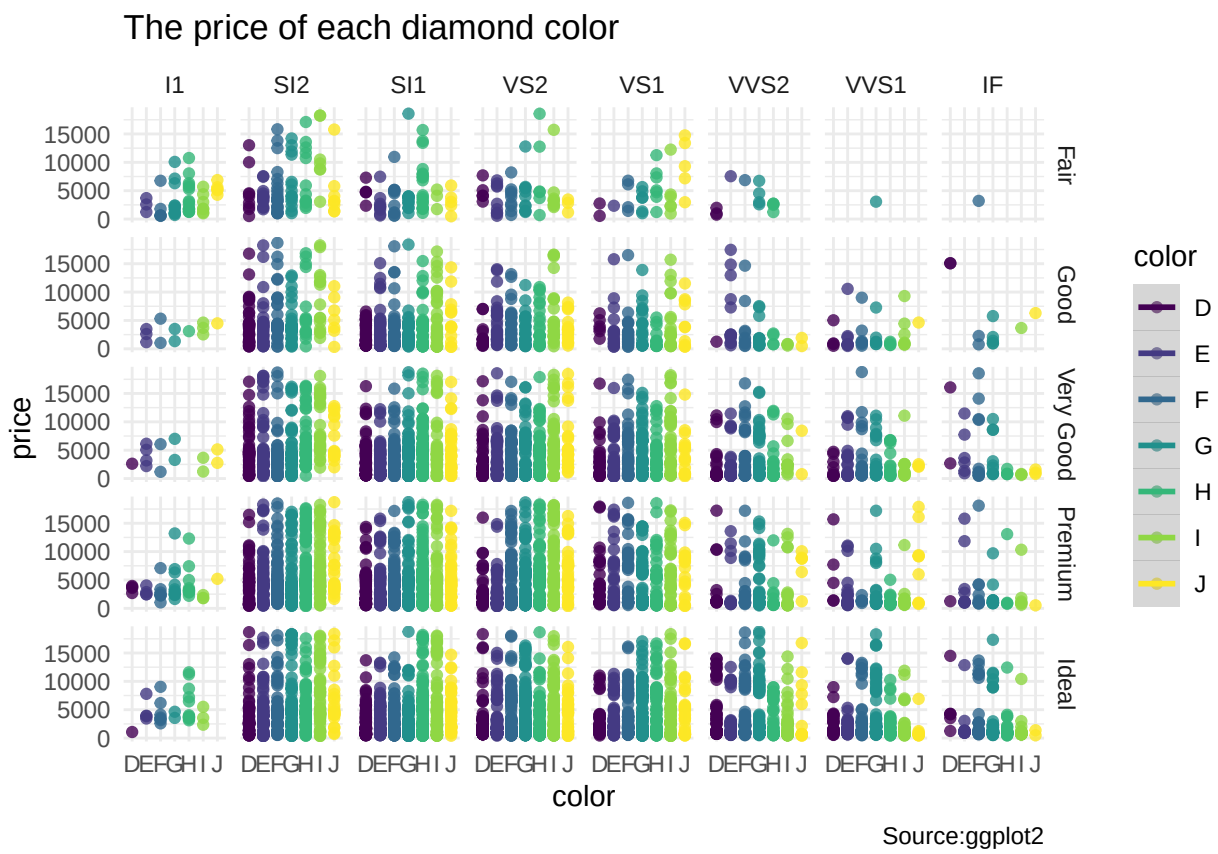
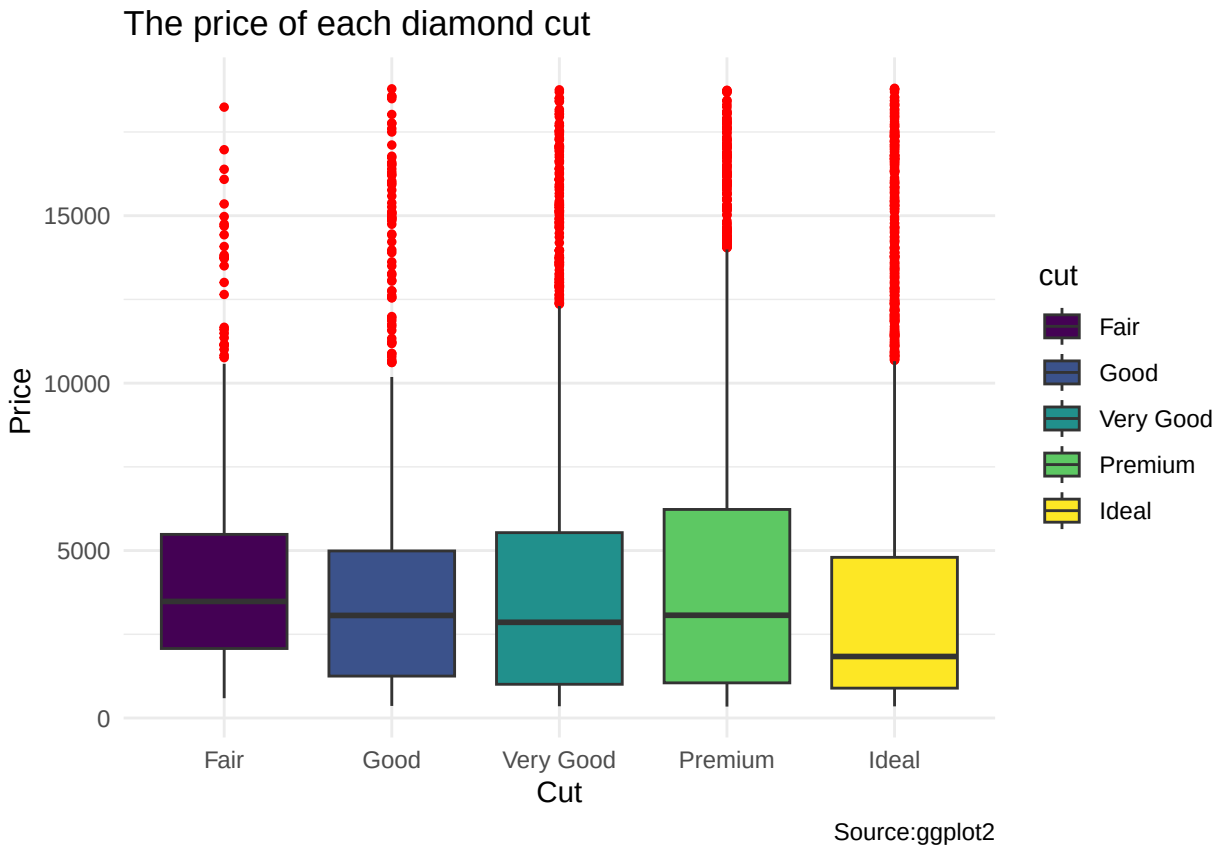


Chart 5 : The price of each diamond cut

```
ggplot(sample_n(diamonds,10000),
                aes(x=cut,y=price,
              fill = cut,)) +
  labs(
  title = "The price of each diamond cut",
  x ="Cut",
  y="Price ",
    caption="Source:ggplot2") +
  geom_boxplot(outlier.size =1 ,outlier.color = "red") +

  theme_minimal()
```


The price of each diamond cut
Price
15000
10000
5000
0
Fair
Good
Very Good
Premium
Ideal
Cut
cut
Fair
Good
Very Good
Premium
Ideal
Source:ggplot2