

# Developing Data Products\_project

weimf

1/13/2022

# My app

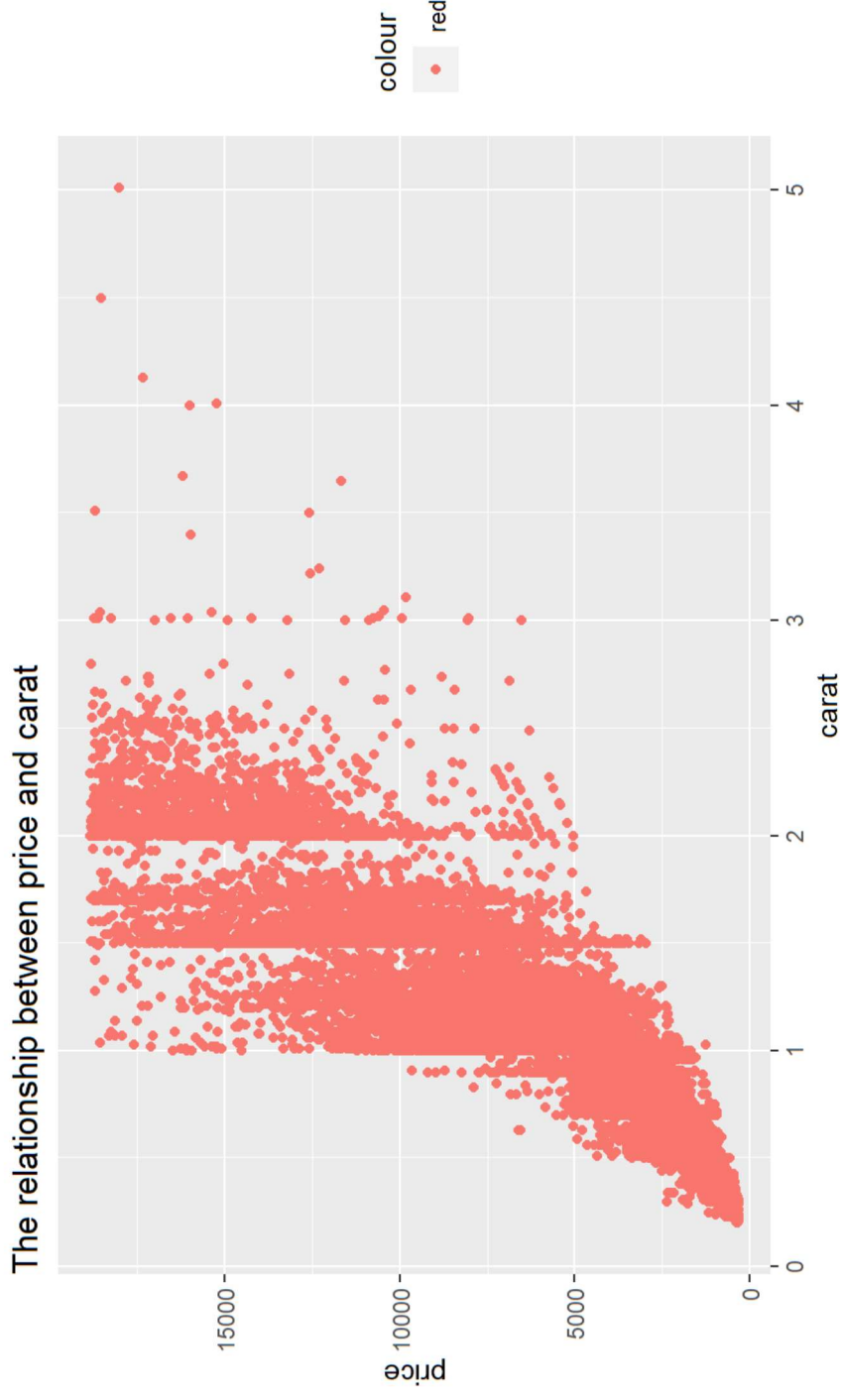
In this project, I will create a Shiny application that assists you to choose your perfect diamonds. I use the ``diamonds`` dataset in R as the primary sources for analysis. The dataset contains the prices and other attributes of almost 54,000 diamonds and thus, should be informative.

# Data Used for analysis

There are 53,940 samples and 10 characteristics of the diamonds. Let's preview the data as below. In addition to the weight (carat) and size(x, y, z) that might affect the price of the diamond, the quality of cut, color, clarity are also determinants of the price of the diamond.

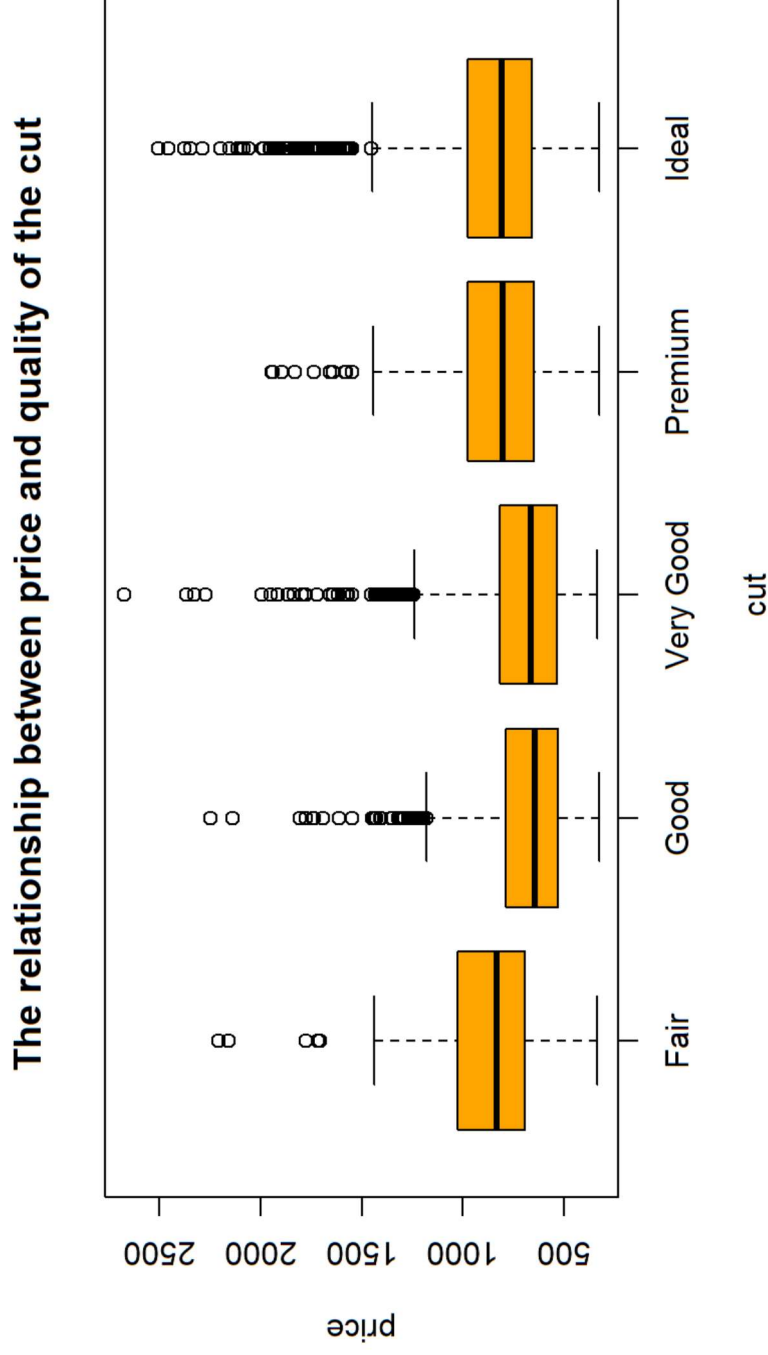
##	carat	cut	color	clarity	depth
##	Min. :0.2000	Fair	D: 6775	SI1 :13065	Min. :43.00
##	1st Qu.:0.4000	Good	E: 9797	VS2 :12258	1st Qu.:61.00
##	Median :0.7000	Very Good:12082	F: 9542	SI2 : 9194	Median :61.80
##	Mean :0.7979	Premium :13791	G:11292	VS1 : 8171	Mean :61.75
##	3rd Qu.:1.0400	Ideal :21551	H: 8304	VS2 : 5066	3rd Qu.:62.50
##	Max. :5.0100		I: 5422	VS1 : 3655	Max. :79.00
##			J: 2808	(Other): 2531	
##	table	price	x	y	z
##	Min. :43.00	Min. : 326	Min. : 0.000	Min. : 0.000	
##	1st Qu.:56.00	1st Qu.: 950	1st Qu.: 4.710	1st Qu.: 4.720	
##	Median :57.00	Median : 2401	Median : 5.700	Median : 5.710	
##	Mean :57.46	Mean : 3933	Mean : 5.731	Mean : 5.735	
##	3rd Qu.:59.00	3rd Qu.: 5324	3rd Qu.: 6.540	3rd Qu.: 6.540	
##	Max. :95.00	Max. :18823	Max. :10.740	Max. :58.900	

# A general picture of the price by carat



If you are looking for a diamond with the carat less than 0.5

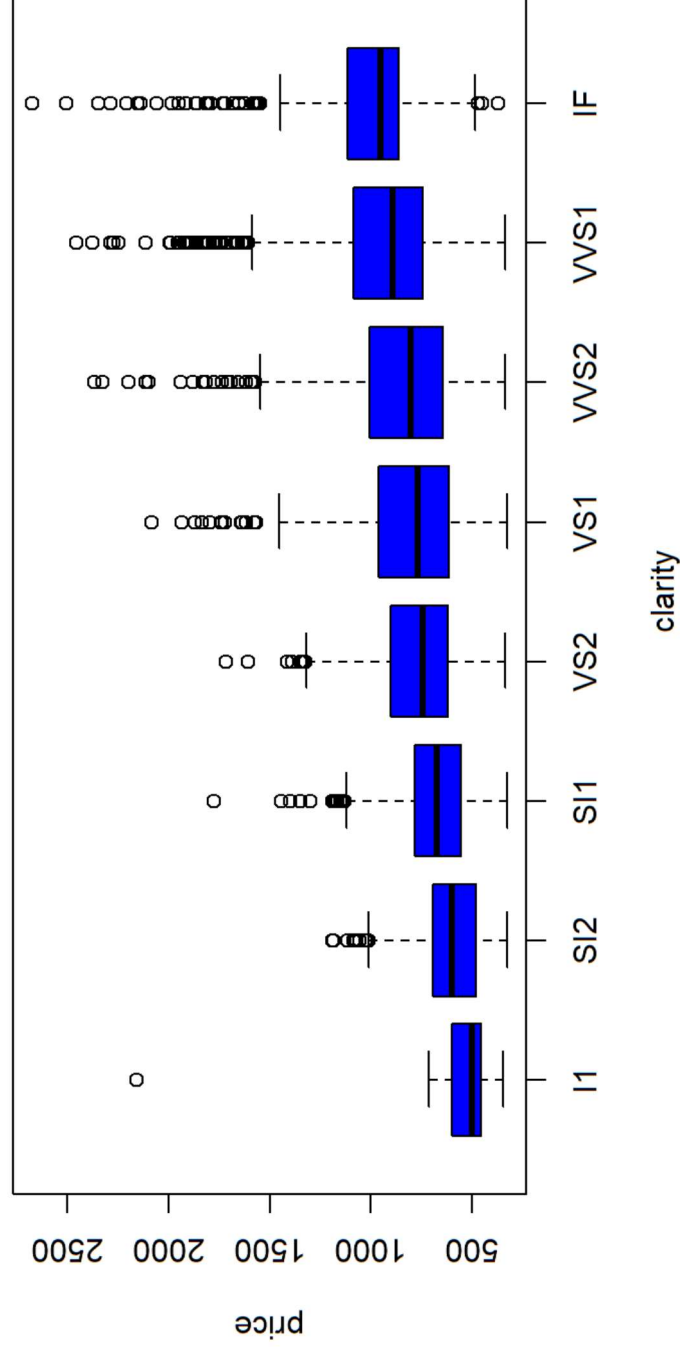
# The relationship between price and quality of the cut



# If you are looking for a diamond with the carat less than 0.5

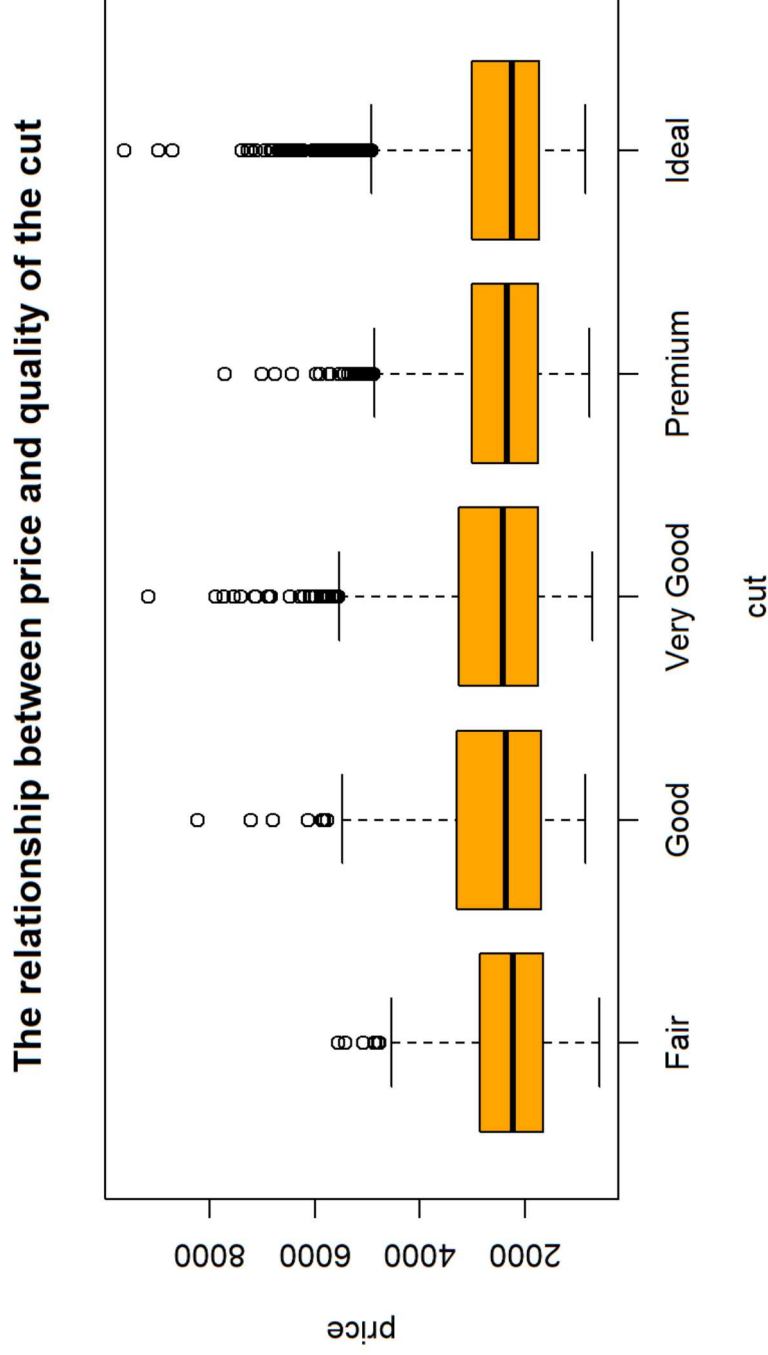
## The relationship between price and clarity

The relationship between price and clarity



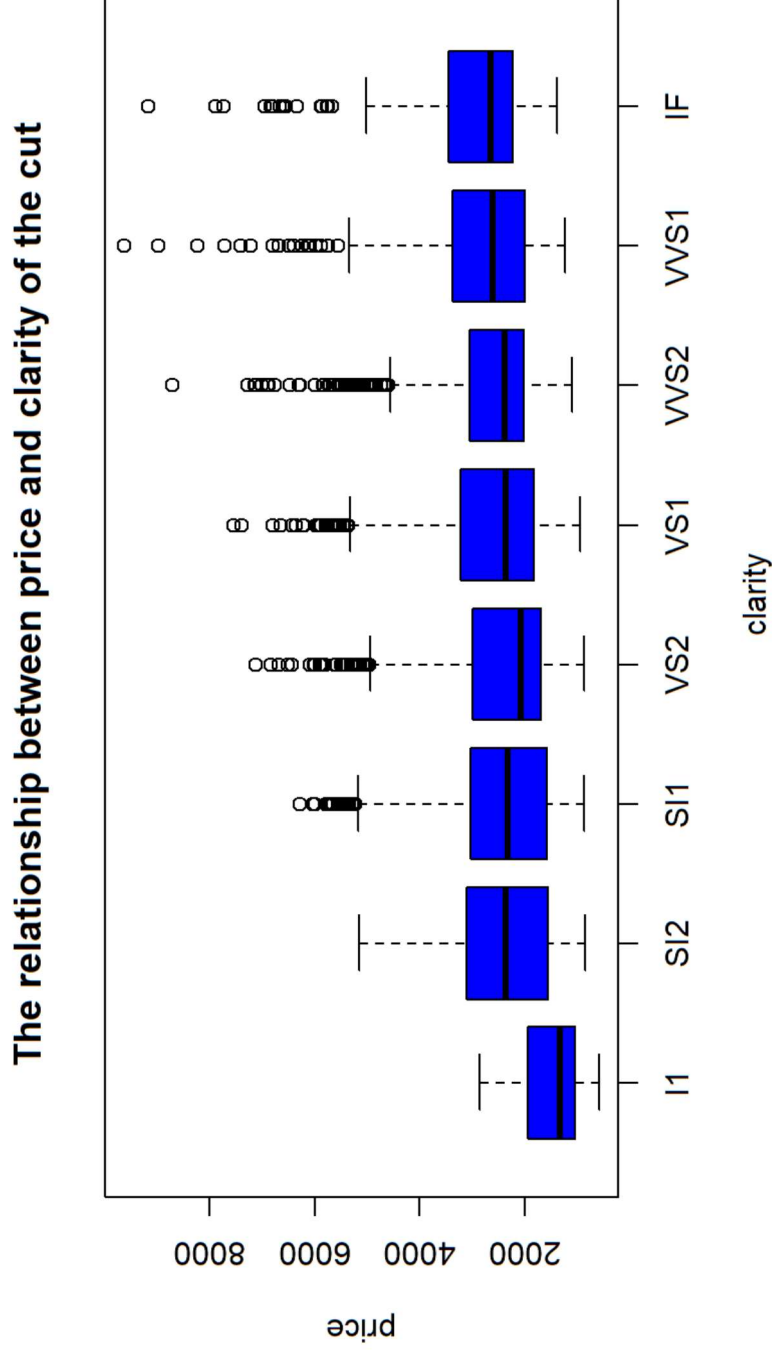
# If you are looking for a diamond with the carat between 0.5 and 1

The relationship between price and quality of the cut



# If you are looking for a diamond with the carat between 0.5 and 1

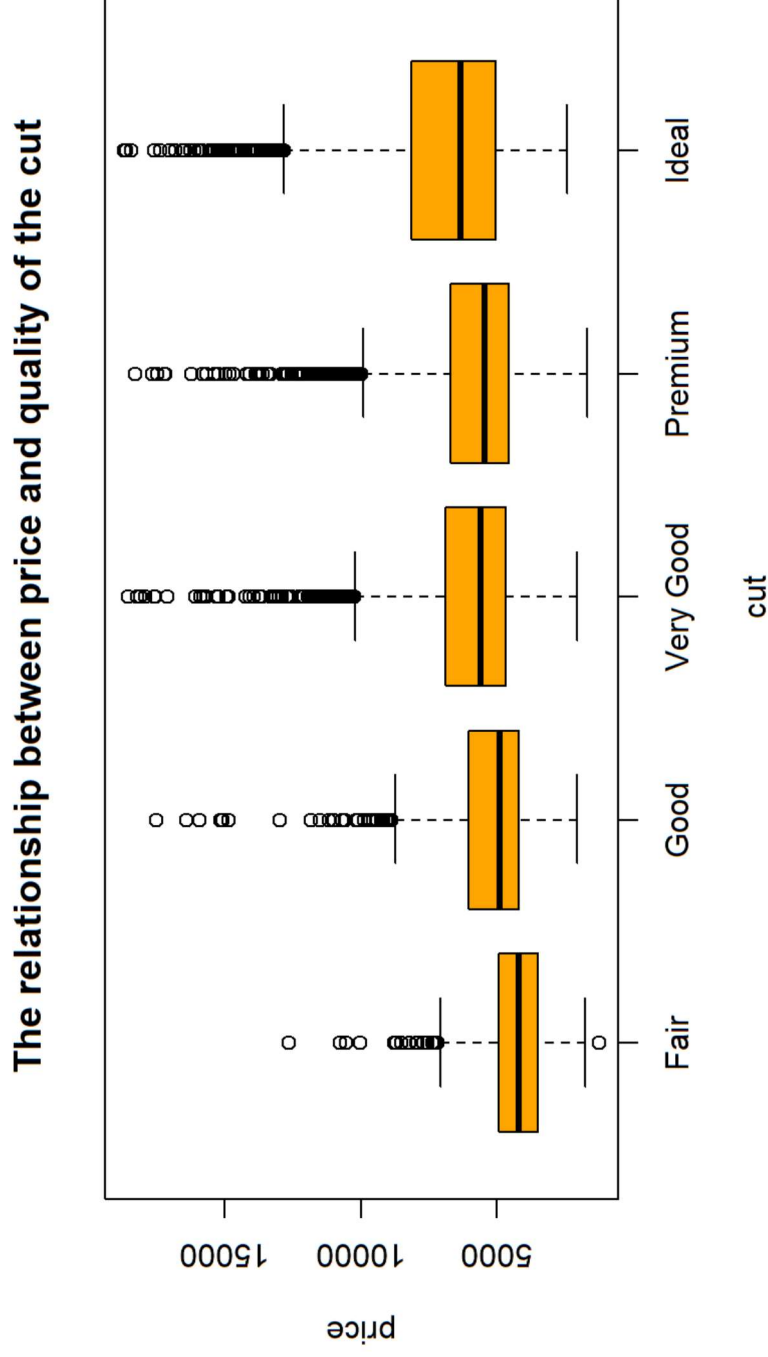
The relationship between price and clarity





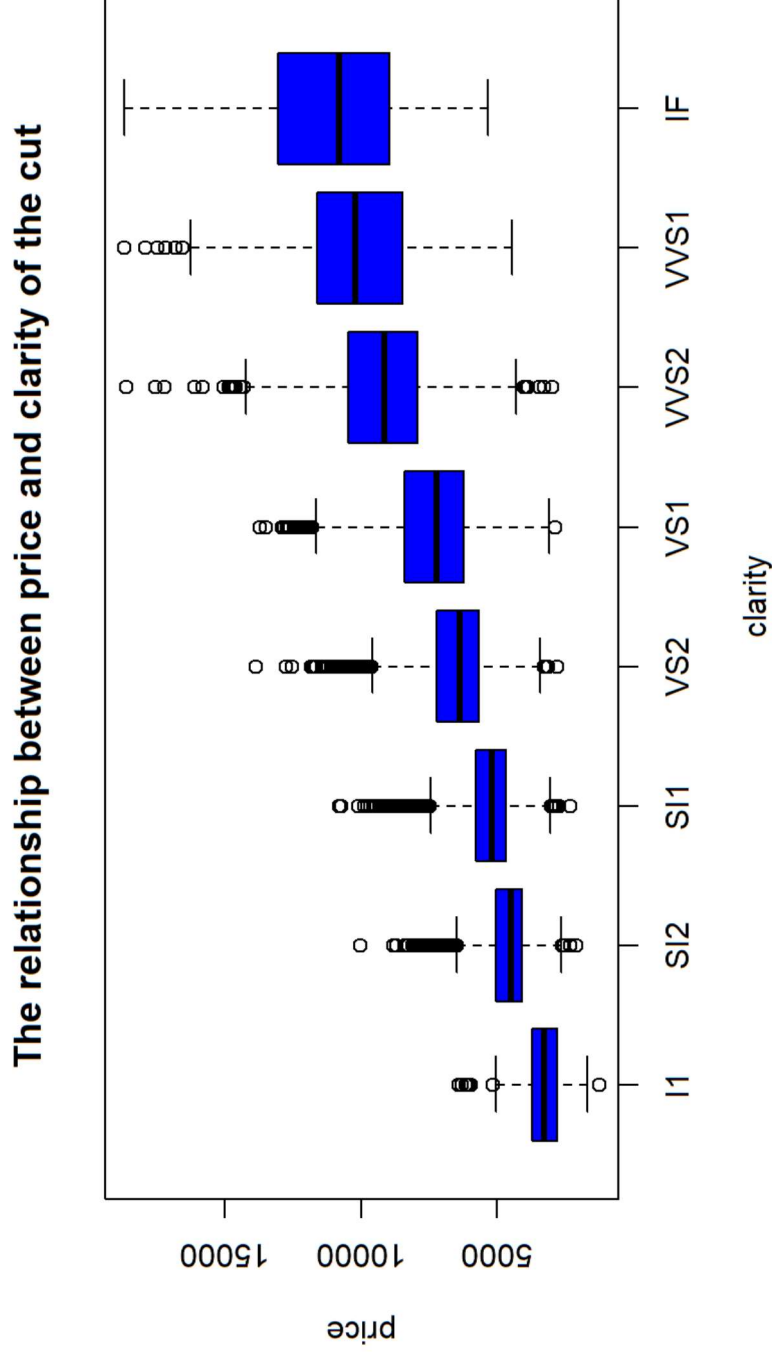
# If you are looking for a diamond with the carat between 1 and 1.5

The relationship between price and quality of the cut



# If you are looking for a diamond with the carat between 1 and 1.5

The relationship between price and clarity



# Let's apply the app to look for your perfect diamond

- The app developed for the the assignment is available at: (<https://weimf.shinyapps.io/myapp/>)
- Files for developing the app and the presentation are available on the GitHub: ([https://github.com/weimf1990/Developing-Data-Products\\_project](https://github.com/weimf1990/Developing-Data-Products_project))