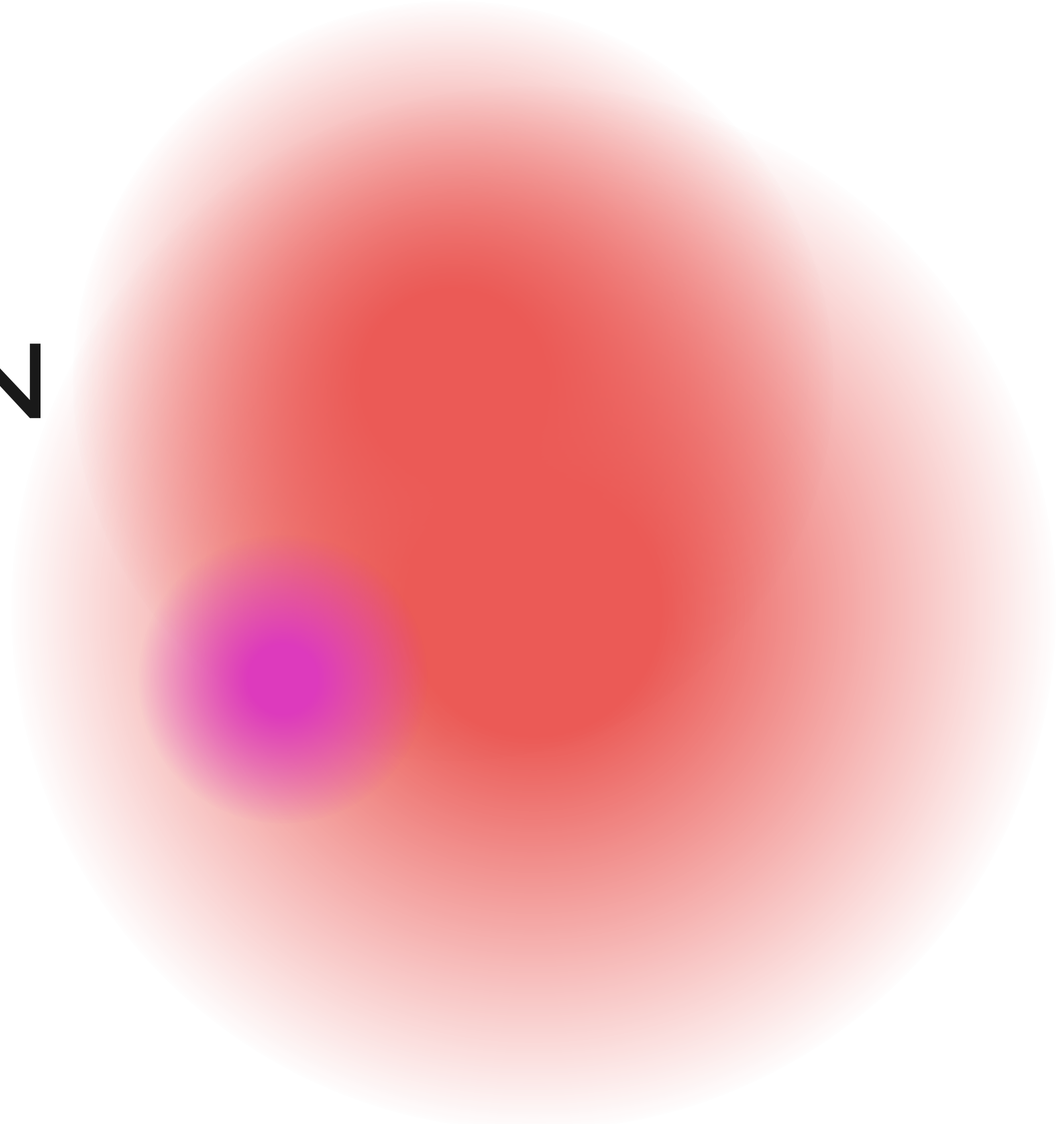
T% DATA SCIENCE BOOTCAMP

LINEAR REGRESSION APPLICATION PRICE PREDICTION



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The dataset are taken from the Google Play website, we are trying to make predictions of the price of the apps, using features such as Rating, Installs, Reviews, Category to help developers improve their work.

STEP 1

Scrapping our data from google play store website

STEP 2

Cleaning & Pre-Processing, Correlations

STEP 3

Linear regression model

STEP 4

Ridge model

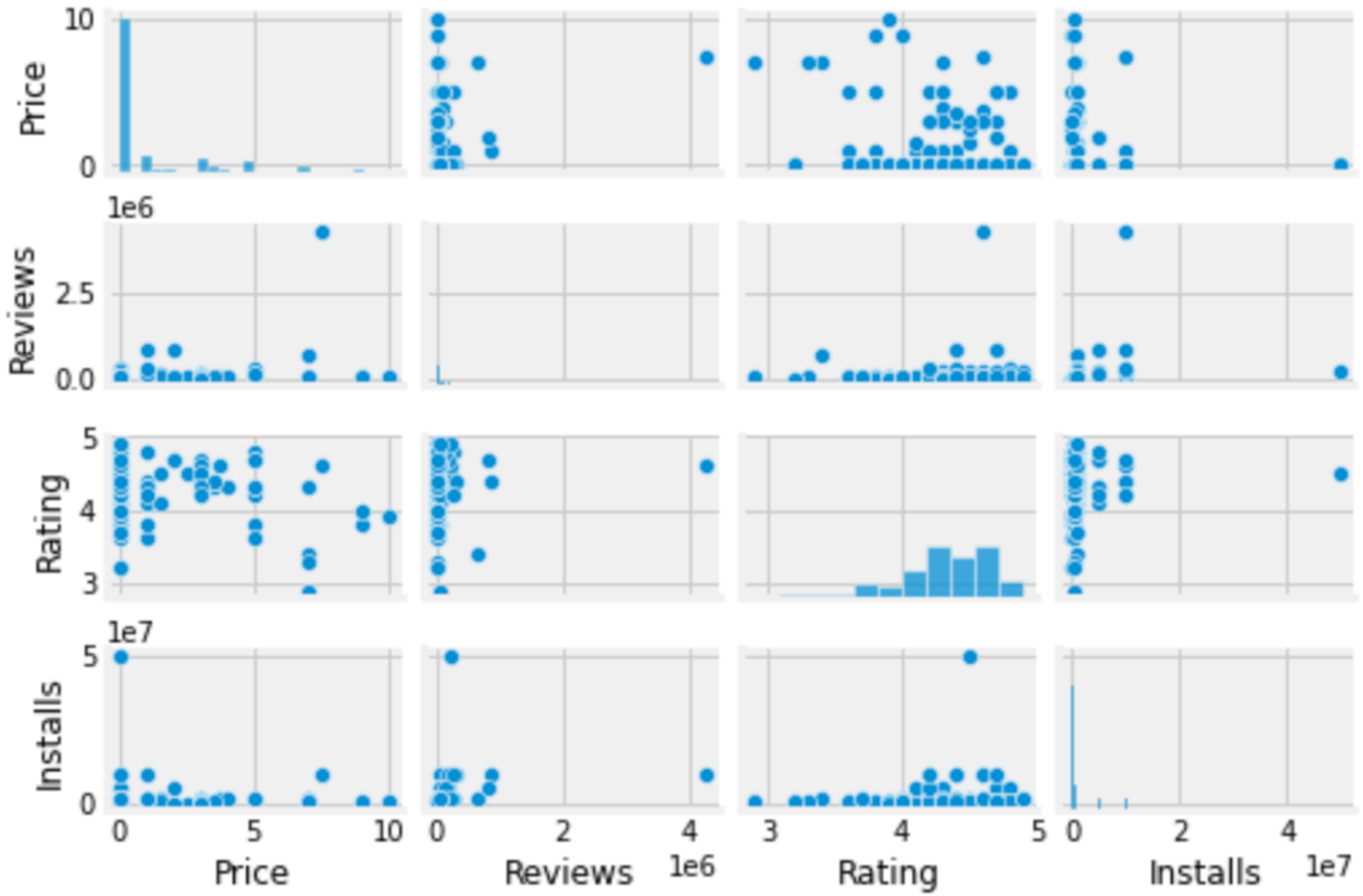
STEP 5

Feature engineering

STEP 6

Assumptions

CORRELLATION



LINEAR REGRESSION FEATURE ENGINEERING

FIRST SCORE WITHOUT DUMMY VARIABLES

```
Linear Regression for test R^2: 0.1690647353900907
```

ADDING DUMMY VARIABLES

```
Linear Regression for test R^2: 0.5980561751597653
```


ADDING QUADRATIC TERMS TO THE DATA FRAME

```
Linear Regression for test R^2: 0.6020564981216501
```

STEP MULTIPLICATIVE INTERACTION

```
Linear Regression for test R^2: 0.6080677905903289
```

RIDGE REGRESSION FEATURE ENGINEERING

- FIRST SCORE

```
Ridge Regression val R^2: 0.531
```

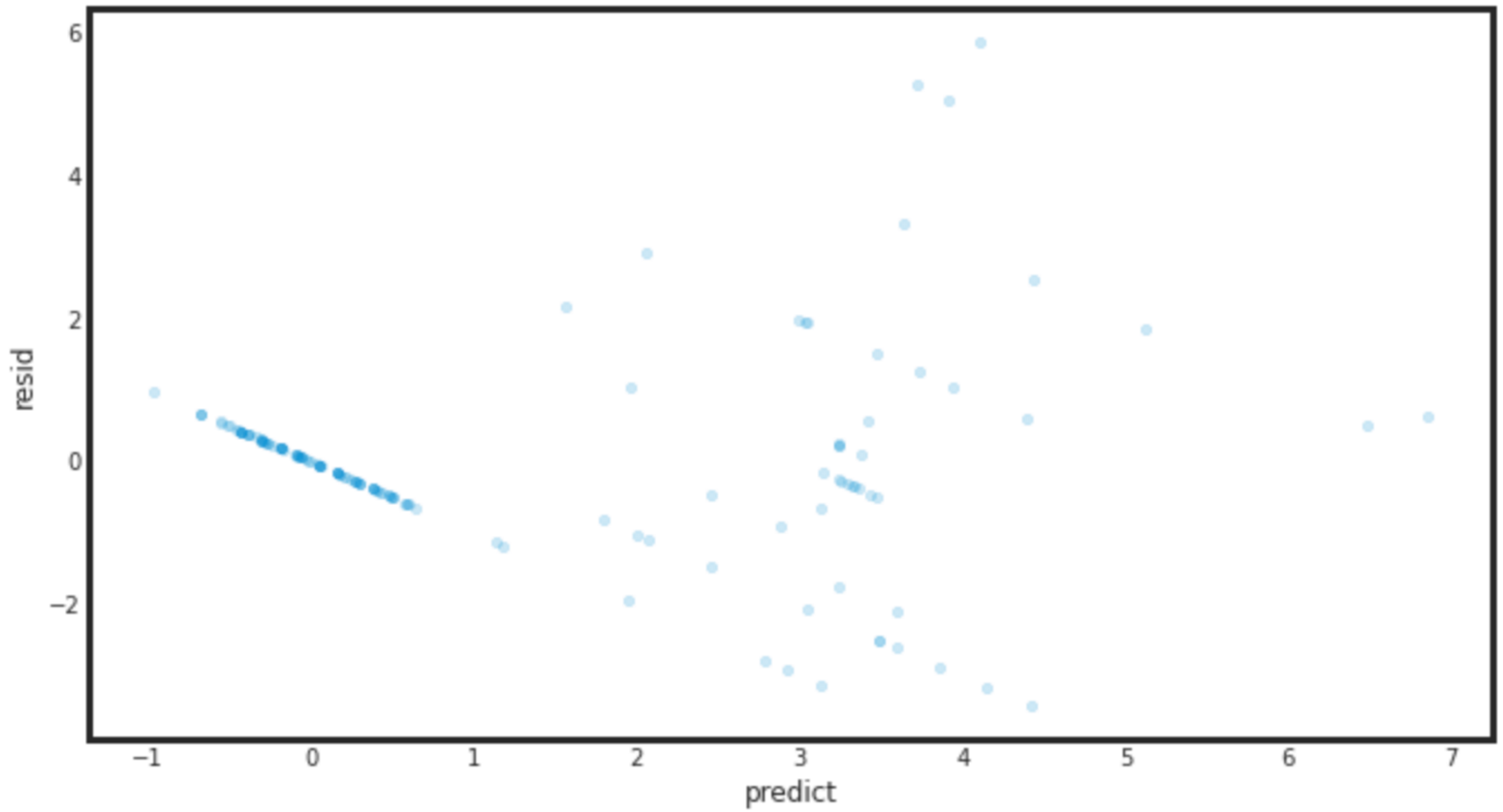
- ADDING QUADRATIC TERMS TO THE DATA FRAME

```
Ridge Regression val R^2: 0.526
```

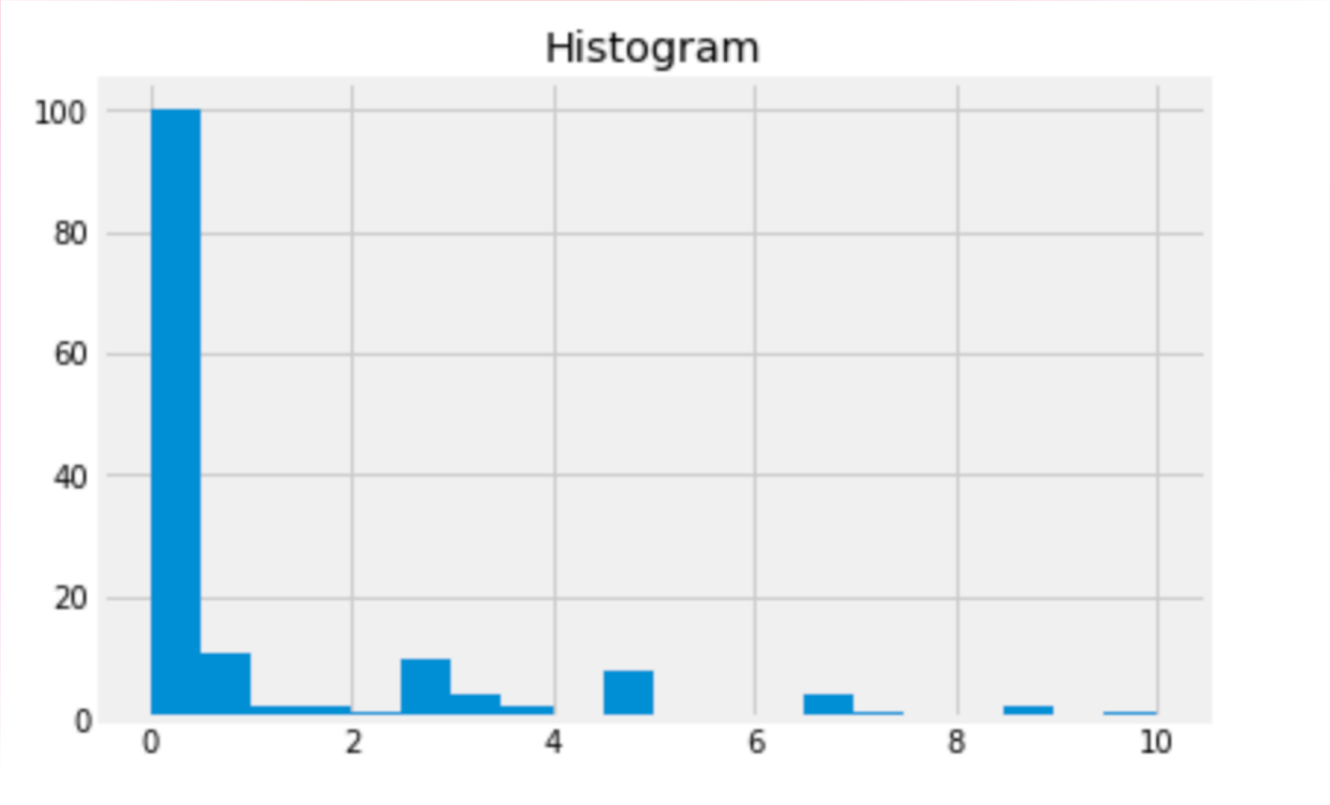
- STEP MULTIPLICATIVE INTERACTION

```
Ridge Regression val R^2: 0.540
```

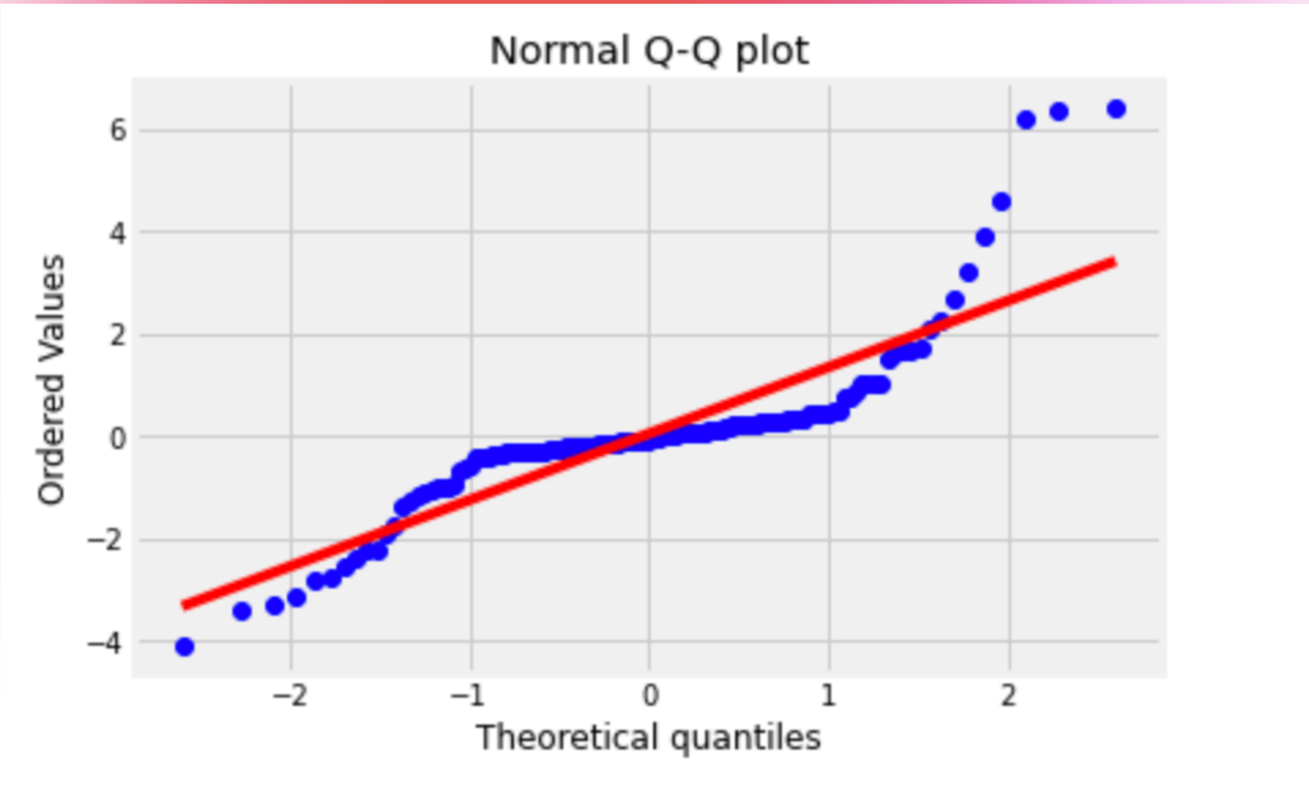
ASSUMPTION: RESIDUAL PLOT



ASSUMPTION: HISTOGRAM



ASSUMPTION: Q-Q PLOT



CONCLUSION

- THERE IS A RELATIONSHIP BETWEEN PRICE AND RATINGS
- IF THE PRICE OF THE APP INCREASE THE RATINGS WILL DECREASE
- THE DATA IS LIMITED ITS BIAESD TO ZERO

THANK YOU !