Gemstone Price Prediction

Stone Price Prediction using Regression Analysis

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Introduction

In this project we will address the subject of gemstones, specifically the stone of cubic zirconia , which is considered one of the most sought after stones, but this wonderful stone has several characteristics and according to its characteristics the price changes . interesting to see any machine learning techniques or continued data visualizations applied on this data set.

Data Description

carat	carat weight of the Stone(0.2—5.01)
cut	cut quality of the cut (Fair, Good, Very Good, Premium, Ideal)
color	Color stone from J (worst) to D (best)
clarity	measurement of how clear the stone is (I1 (worst), SI2, SI1, VS2, VS1, VVS2, VVS1, IF (best))
depth	total depth percentage =z/mean(x,y)=2*z/(x+y)(43 --79)
table	The width of top of stone ta relative to widest point(43--95)
x	Length in mm (0-- 10.74)
y	Width in mm (0--58.9)
z	Depth in mm (0--31.8)
price	stone price in US dollars

Get this Dataset from [Kaggle.com]

26967 rows × 11 columns

Used Tool

- Technologies

  Jupyter Notebook , Python

- Libraries

  Pandas , Numpy, Matplotlibe, Seaborn , Sklearn

- Algorithm

  LinearRegression

Questions:

1. What's the most stone of clarity ?
2. What color is the best-selling stone ?
3. Does the weight of the stone affect its price ?
4. Does the quality of the stone affect its price ?
5. What is the maximum and minimum price of a stone based on its carat weight?