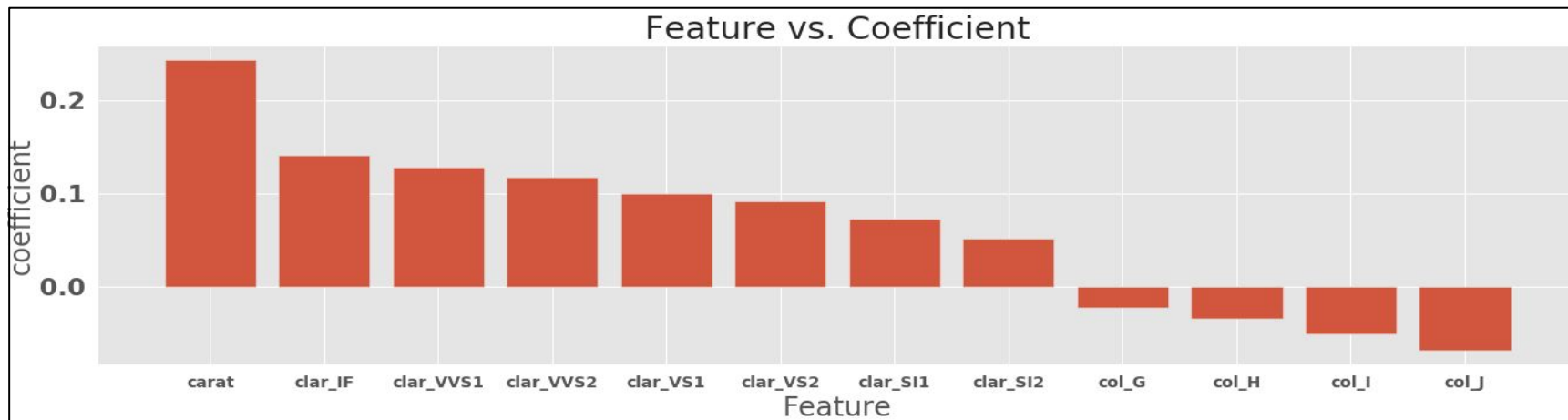


Making the Cut

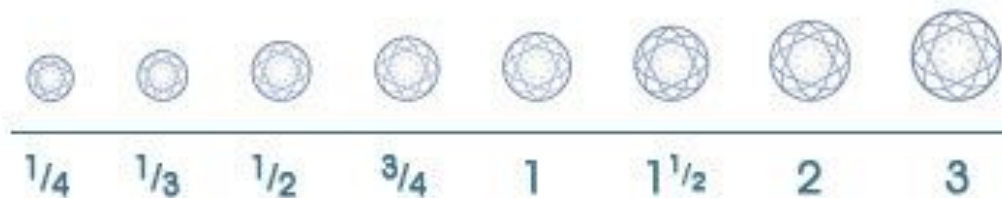


Presented by:
Brendan Bullivant and Chris Chung

What makes a diamond sparkle?



The Carat - the unit of weight of diamonds, equal to 0.200 grams



However, bigger isn't always better: depending on the quality of a diamonds cut, color, and clarity the value of a diamond will respond accordingly.

How big is a big diamond?



An average diamond is normally sized around 1 carat and a large diamond is considered to be around 2 carats.

Question: Is this carat difference reflected in the price?

Yes! There is a significant difference between this minute increment in carat weight.

No other nearby increments showed this same significant difference!

Modeling



Our features include the 4C's of diamonds - Carat, Color, Cut, Clarity.

Our model performed very well.

Train R²: 0.9806

Test R²: 0.9804

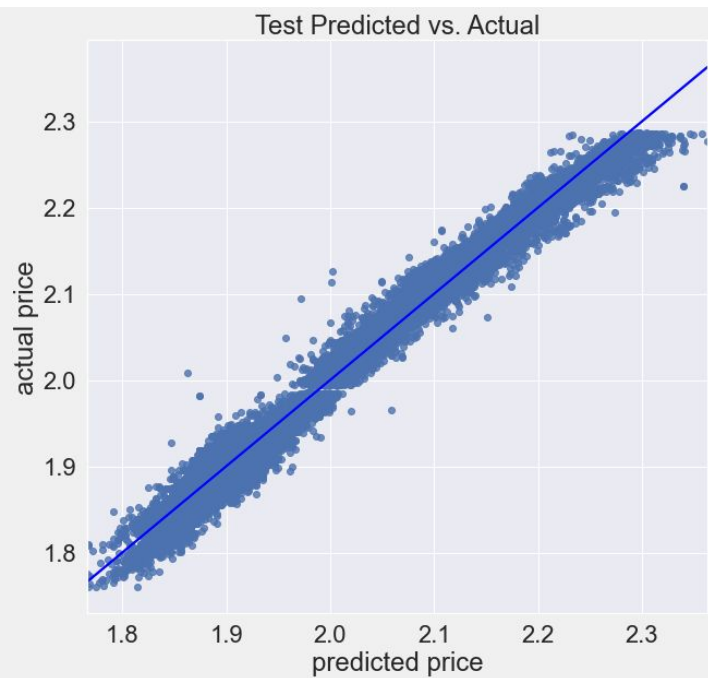
Train Root Mean Squared Error: 0.018217304797526316

Test Root Mean Squared Error: 0.0184

Training Model vs Test Model

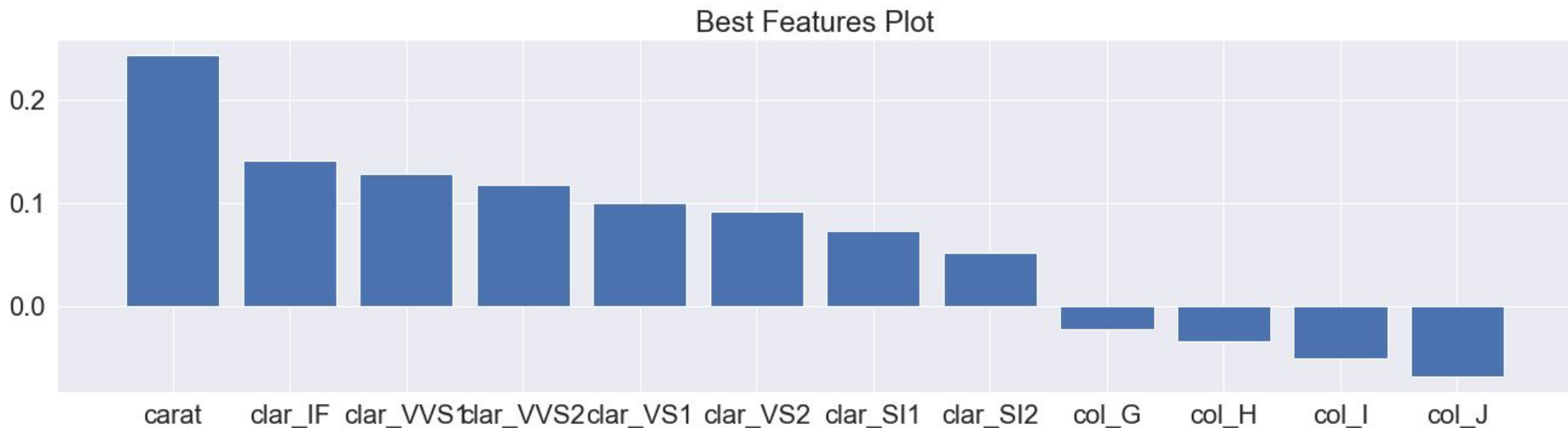


Train R2:
0.9806



Test R2:
0.9804

Carat, Clarity and Color are stronger features.



Our strongest features are Carat and IF Clarity.

Carat Interpretation: For every 1 increase in Carat, the price increases by 18%

IF Clarity Interpretation: If the diamond has IF clarity, the price increases by 15%.



Business Inferences for Seller:

- A high grade **color** may not increase the diamond value, but having a lower grade color will actually decrease it.
- Diamond **cut** doesn't have a significant effect on the diamond value either positively or negatively.
- **Carat** has the highest influence on the diamond's value.
- All **clarity** grades have the second highest influence on the diamond's value.



Business Inferences for a Budget Buyer

- **Buy under 2 carats** as the price of a diamond just under 2 is significantly less.
- If you want the largest diamond for your money, and that's the only parameter of interest, then look for a high carat diamond with a **low grade color and clarity.**
- Cut doesn't influence the price as much as the other qualities.
- **BEST DEAL:**
- Low grade clarity, low grade color, any cut, under 2 carats.

Thank you!

Presented by Bullivant and Chung's Jewelers

