Objective

The main objective of this project is to develop a predictive model that can accurately estimate the prices of diamonds based on their characteristics. By analyzing the dataset and identifying patterns and relationships, the model will be able to predict the prices of unseen diamonds as well.

Column Name	Description
carat	Weight of the diamond
cut	Quality of the cut (Fair, Good, Very Good, Premium, Ideal)
color	Diamond colour, from J (worst) to D (best)
clarity	How clear the diamond is (I1 (worst), SI2, SI1, VS2, VS1, VVS2, VVS1, IF (best))
x	Length in mm
y	Width in mm
z	Depth in mm
depth	Total depth percentage = z / mean(x, y) = 2 * z / (x + y) (43--79)
table	Width of top of diamond relative to widest point (43--95)
price	Price in US dollars (326--18,823)

Impact

Accurate price prediction for diamonds has significant implications for various stakeholders, including buyers, sellers, and jewelers. A reliable predictive model can assist buyers in making informed decisions when purchasing diamonds and help sellers set competitive prices. Additionally, jewelers can benefit from price estimation to assess the value of their inventory and determine appropriate pricing strategies.

This project aims to leverage machine learning techniques to extract valuable insights from the dataset and build a robust model for diamond price prediction. By accurately estimating diamond prices, it contributes to the efficiency and transparency of the diamond market and enhances decision-making in the jewelry industry.