**Diamond Price Analysis**

**Abstract:**

The "Diamond Price Analysis" project aims to explore the factors influencing the pricing of diamonds in the market. Diamonds are valued based on various attributes such as carat weight, cut, color, and clarity, among others. This project involves collecting a data set of diamond characteristics and their corresponding prices to perform a comprehensive analysis.The project seeks to uncover insights that can aid in predicting diamond prices and provide valuable information to stakeholders in the diamond industry.

**Objective:**

Analyzing the relationship between diamond attributes (carat, cut, color, clarity, depth, table, and size) and their prices to identify the most influential factors affecting diamond prices.

**Methodology:**

1. Data Collection:

- Collecting Data set from the kaggle website.

2. Data Pre processing

- Handle missing values by imputation or removal.

3. Exploratory Data Analysis:

- Use statistical summaries and visualizations to explore the data set.

4. Feature Engineering:

- Assess feature importance using techniques like correlation analysis and feature selection algorithms.

**Tools and Technologies:**

- Programming Languages: Python

- Data Analysis Libraries :

Pandas: For Data Structure.

NumPy: For Numerical Data Analysis.

Matplotlib: For Visulization Purpose

Seaborn: For Statistical Plots.

**Expected Outcomes:**

- A comprehensive understanding of the factors influencing diamond price.

This project aims to provide valuable insights and a practical tool for the diamond industry.