**Project Title: Sports Cars Price Project – Market Trends and Performance Analysis**

**Objective:**

To explore and visualize pricing trends in the sports car market by examining brand, model, performance features, and temporal patterns. The aim is to uncover insights into how vehicle characteristics influence market value over time.

**Project Phases:**

**1. Data Collection**

* Source dataset from Kaggle
* Ensure dataset includes fields such as: brand, model, year, price, horsepower, acceleration, and top\_speed

**2. Data Cleaning & Preparation**

* Handle missing or inconsistent data (e.g., prices or performance values).
* Convert data types where necessary (e.g., year to int, price to float).
* Filter outliers (e.g., extreme price or performance values that skew analysis).

**3. Exploratory Data Analysis (EDA)**

* Analyze pricing distribution by:
  + Brand and model
  + Year of manufacture
  + Performance features (e.g., horsepower, acceleration)
* Correlation analysis between price and key metrics
* Identify high-value and underperforming segments

**4. Visualizations**

* **Python (Matplotlib/Seaborn)**:
  + Price distribution histograms
  + Scatter plots: price vs. horsepower, acceleration
* **Tableau**:
  + Interactive dashboard showcasing:
    - Year-over-year price trends
    - Price comparison by brand and performance
    - Filters by fuel type, body type, and region (if applicable)

**5. Insights & Reporting**

* Summarize patterns in sports car pricing and performance
* Highlight standout brands/models in terms of value

**Tools & Technologies:**

* **Programming Language**: Python
* **Libraries**: Pandas, Matplotlib, Seaborn, Document
* **Dashboarding**: Tableau
* **IDE**: Jupyter Notebook