**📌 What I have done in this Case Study – (Cars24 Case Study )**

1. **Data Import & Setup**
   * Imported dataset train-cars24-car-price.csv into Google Colab.
   * Used libraries like **NumPy, Pandas, Matplotlib, Seaborn** for data handling and visualization.
2. **Data Understanding & Cleaning**
   * Looked at dataset shape, head, and summary.
   * Identified key columns like full\_name, selling\_price, mileage, year, etc.
   * Extracted **Make** and **Model** information from full\_name column for better analysis.
3. **Exploratory Data Analysis (EDA)**
   * Checked **distribution of selling price** (range: ~0.33 to 395 lakhs).
   * Analyzed **mileage trends** across cars.
   * Looked at **year vs selling price** → older cars had lower resale value.
   * Explored **fuel type & transmission impact** on car prices.
   * Visualized relationships using scatter plots, bar charts, and boxplots.
4. **Insights Derived**
   * **Car age strongly impacts selling price** → newer cars fetch much higher resale.
   * **Fuel type (Petrol/Diesel vs CNG/Electric)** affects resale differently.
   * **Mileage plays a role**, but its impact is secondary compared to age and brand.
   * Certain **brands consistently show higher resale value** (premium perception).
   * Manual vs Automatic transmission shows **clear price differences**.

**📊 Insights in a Professional Tone**

* **Depreciation Insight**: Cars lose value rapidly in the first few years, highlighting the importance of age in pricing.
* **Brand Loyalty**: Premium brands maintain better resale value due to higher demand.
* **Fuel Economy Trade-off**: Mileage influences price, but buyers still prioritize newer models over high-mileage older ones.
* **Market Preference**: Transmission type influences buyer willingness to pay, with automatics often priced higher.