Web Scraping Car Details from Cars24

Objective

The objective of this project was to extract detailed information about used cars listed on Cars24 using web scraping techniques. The goal was to gather data such as car names, prices, fuel types, kilometers driven, transmission types, ownership details, and location, and then organize this data into a structured format (CSV) for further analysis.

What I Have Done

1. Tools and Technologies Used

- Python (Programming language)
- Selenium (For web scraping and automation)
- Pandas (For data manipulation and CSV export)
- Google Colab (For running the script in a cloud environment)

2. Steps Followed

- Setup Selenium in Google Colab
    - Installed necessary dependencies (`chromium-chromedriver`, `selenium`).
    - Configured Chrome options for headless browsing.
- Listed Target URLs
    - Selected 10 different used car listings from Cars24 (Hyderabad location).
- Scraped Data
    - Extracted the following details for each car:
    - Car Name (e.g., "2018 Honda City 1.5L I-VTEC ZX CVT")
    - Price (in ₹ lakhs)
    - Fuel Type (Petrol/Diesel)
    - Kilometers Driven (e.g., "35,808 km")
    - Transmission (Manual/Automatic)
    - Owner (1st/2nd)
    - Location (Hyderabad)
    - URL (Link to the car listing)
- Stored Data in CSV
    - Cleaned and formatted the scraped data.
    - Exported it into a CSV file (`cars24_selected_cars.csv`).

3. Challenges Faced

- Dynamic Web Elements: Some car details had varying class names, requiring careful XPath handling.
- Page Load Delays: Added `time.sleep()` to ensure proper loading before scraping.
- Data Cleaning: Removed unnecessary symbols (e.g., "₹") and standardized units.

4. Results

- Successfully scraped 10 car listings with accurate details.
- Created a structured dataset for future analysis (e.g., price trends, popular models).

Conclusion

This project demonstrates how web scraping can be used to collect real-time data from e-commerce platforms like Cars24. The extracted dataset can be useful for:

- Comparing car prices based on model, year, and condition.
- Analyzing market trends for used cars in Hyderabad.
- Building a recommendation system for car buyers.