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Project Proposal: Analysis of the Used Car Market in Poland

Overview

This project proposal outlines a comprehensive analysis of the used car market in Poland, utilizing data sourced from OLX Poland. The objective is to understand market trends, pricing patterns, and consumer preferences to provide actionable insights for stakeholders such as car dealerships, private sellers, and potential buyers.

Tools

- Python: For data scraping, cleaning, analysis, and machine learning.
- Jupyter Notebook: To document the analysis process and code in an interactive format.
- Power BI: For creating interactive visualizations and dashboards.
- GitHub: To manage version control of the project scripts, notebooks, and documentation.

Data Source:

From OLX Poland, which includes listings of used cars across various regions of Poland. This dataset will provide information on car make, model, year, mileage, condition, price, and seller type (private or dealer).

Methodology

1. Data Collection:
    a. Extract data from OLX Poland using web scraping techniques in Python, focusing on relevant fields necessary for the analysis.
2. Data Cleaning and Preprocessing:
    a. Clean the dataset to handle missing values, outliers, and inconsistencies.
    b. Normalize data formats and categorize data for easier analysis.
3. Data Analysis:
    a. Use statistical methods and machine learning models in Python to analyze the data.
    b. Perform regression analysis to understand the factors affecting car prices.
    c. Cluster analysis to segment the market based on consumer preferences and behaviors.
4. Data Visualization:
    a. Utilize Power BI to create interactive dashboards and visualizations that represent the analysis results clearly and effectively.
    b. Develop charts, maps, and graphs to display trends, correlations, and market insights.

Conclusion

This project will leverage robust analytical tools and methods to deliver deep insights into the used car market in Poland