**Car Segmentation Report**

Project: **Car Insurance report**

The dataset includes 15,420 records with 33 columns.

* **Demographics**: Sex, Marital Status, Age, Age of Policy Holder
* **Vehicle Information**: Make, Vehicle Category, Vehicle Price, Age of Vehicle, Number Of Cars
* **Policy Details**: Policy Type, Base Policy, Deductible, Driver Rating
* **Claim Information**: Fraud Found P (indicating fraud status), Day Policy Accident, Days Policy Claim, Past Number of Claims
* **Additional Factors**: Accident Area, Witness Present, Police Report Filed, Agent Type

1. **Objective**
   * Segment customers to better understand claim patterns, fraud tendencies, and risk factors.
2. **Methodology**

Load and clean the dataset using pandas, then perform numerical analysis with descriptive statistics and correlations using pandas and Numpy Visualize key patterns make , age , marriage status using seaborn.

1. **Segmentation Analysis**
   * **Demographic-Based Segments**: Identify segments based on age, marital status, and gender.
   * **Policy-Based Segments**: Group by policy type, deductible amount, and coverage.
   * **Claim Behavior Segments**: Analyze segments by frequency of claims, claim amount, and fraud status.
   * **Risk Level Segments**: Based on vehicle price, accident area, and driver rating.
2. **Insights and Implications**
   * Outline characteristics of high-risk segments.
   * Highlight segments with frequent fraud cases.
   * Suggest tailored policy offerings or fraud prevention measures for each segment.
3. **Recommendations**
   * Strategies for targeted customer engagement.
   * Personalized risk assessment models for high-risk groups.
   * Fraud detection improvements based on segment-specific insights.