Insurance Claim

Problem statement

* **Capital Gain and Loss Analysis**: Identify patterns in claims associated with capital gains and losses across different vehicle models to understand the financial impact and optimize underwriting policies.
* **Fraud Detection**: Leverage existing fraud report data to build predictive models or rules that can detect fraudulent claims, reducing financial losses and ensuring fair claim processing.
* **Model-Specific Insights**: Analyze claims data by vehicle models to uncover trends, such as higher claim frequencies or severity for specific models, aiding in risk assessment and premium adjustments.
* **Data Quality and Completeness**: Evaluate the dataset for missing or inconsistent data and develop methods to address these issues to ensure robust and reliable analysis.

The analysis aims to:

* Improve the accuracy of capital loss and gain predictions for claims.
* Enhance fraud detection mechanisms, ensuring faster identification and resolution of fraudulent claims.
* Provide actionable insights for insurance pricing and risk management tailored to vehicle models.
* Support decision-making by presenting clear, data-driven visualizations and reports.

This project will enable the insurance company to optimize its claims processes, mitigate fraud, and enhance its overall operational efficiency.

**Landscape**

**Data**

* Raw data collected includes columns like vehicle model, capital gain, capital loss, and fraud report.
* Contains missing values, outliers, and categorical variables that require preprocessing.

**Information**

* Preprocessed data reveals trends in claims frequency, capital changes, and fraud indicators.
* Feature engineering enhances the dataset with new insights, such as binning numeric variables and creating combined features.

**Knowledge**

* Insights gained from analyzing trends and patterns in vehicle claims.
* Predictive models provide actionable knowledge, such as identifying high-risk vehicle models and detecting fraudulent claims efficiently.