**Insurance Data Analysis and Claim Incident Analysis**

**Overview**

This Power BI project centers on the analysis of insurance data and claim incidents. The dataset comprises 1,000 individual claims, with the main objective being to present insights into insurance coverage and incidents. It includes 40 distinct attributes for each claim, organized into four key categories: insured individual details, policy information, incident descriptions, and the characteristics of the involved vehicle.

**Dataset Columns**

The dataset used in this Power BI project contains the following columns:

* months\_as\_customer: Number of months the person has been a customer with the insurance company
* age: Age of the insured person
* policy\_number: Unique identifier for each insurance policy
* policy\_bind\_date: Date when the policy was bound
* policy\_state: State in which the policy was issued
* policy\_csl: Coverage limit of the policy in the form of combined single limits
* policy\_deductable: Deductible amount specified in the policy
* policy\_annual\_premium: Annual premium amount for the policy
* umbrella\_limit: Coverage limit provided by an umbrella policy
* insured\_zip: ZIP code of the insured person
* insured\_sex: Gender of the insured person
* insured\_education\_level: Education level of the insured person
* insured\_occupation: Occupation of the insured person
* insured\_hobbies: Hobbies of the insured person
* insured\_relationship: Relationship of the insured person with the policyholder
* capital-gains: Capital gains associated with the incident
* capital-loss: Capital losses associated with the incident
* incident\_date: Date of the incident
* incident\_type: Type of incident (e.g., single vehicle collision, multi-vehicle collision)
* collision\_type: Type of collision in the incident
* incident\_severity: Severity of the incident
* authorities\_contacted: Authorities contacted after the incident
* incident\_state: State in which the incident occurred
* incident\_city: City in which the incident occurred
* incident\_location: Location of the incident
* incident\_hour\_of\_the\_day: Hour of the day when the incident occurred
* number\_of\_vehicles\_involved: Number of vehicles involved in the incident
* property\_damage: Whether property damage occurred during the incident
* bodily\_injuries: Number of bodily injuries in the incident
* witnesses: Number of witnesses present during the incident
* police\_report\_available: Whether a police report is available for the incident
* total\_claim\_amount: Total claim amount associated with the incident
* injury\_claim: Claim amount for injuries
* property\_claim: Claim amount for property damage
* vehicle\_claim: Claim amount for vehicle damage
* auto\_make: Make of the involved vehicle
* auto\_model: Model of the involved vehicle
* auto\_year: Year of the involved vehicle
* fraud\_reported: Whether the claim is reported as fraudulent (1) or not (0)

**Project Goals**

The key objectives of this Power BI project are:

* Analyze the occurrence and distribution of fraudulent claims within the dataset.
* Identify patterns or factors that suggest an increased probability of fraud in insurance claims.
* Examine the relationship between various attributes and the likelihood of fraud.
* Visualize key characteristics of insured individuals, policy details, and incident descriptions.
* Provide insights into claim amounts and the distribution of claims across different categories.
* Detect trends or patterns related to the timing and location of incidents.

**Data Analysis and Visualization**

This project leverages Power BI to deliver a range of interactive visualizations and dashboards. The visualizations and analyses may include:

* Bar charts showing the distribution of occupations and education levels based on the number of claims and claim amounts.
* Pie charts illustrating the breakdown of claim numbers and their corresponding amounts.
* Line charts exploring the relationship between age and the number of claims.
* Time series charts to examine trends and incident frequency over time.
* Gauges to display claim amounts and the distribution of claims across different categories.

**Conclusion**

The Insurance Data Analysis and Claim Incident Analysis Power BI project offers valuable insights into insurance claim data, with an emphasis on fraud detection and understanding claim characteristics. By examining various attributes and visualizing trends, the project seeks to help insurance professionals identify potential fraud and enhance overall claim management practices.