

UPGRAD ASSIGNMENT

Fraud Detection

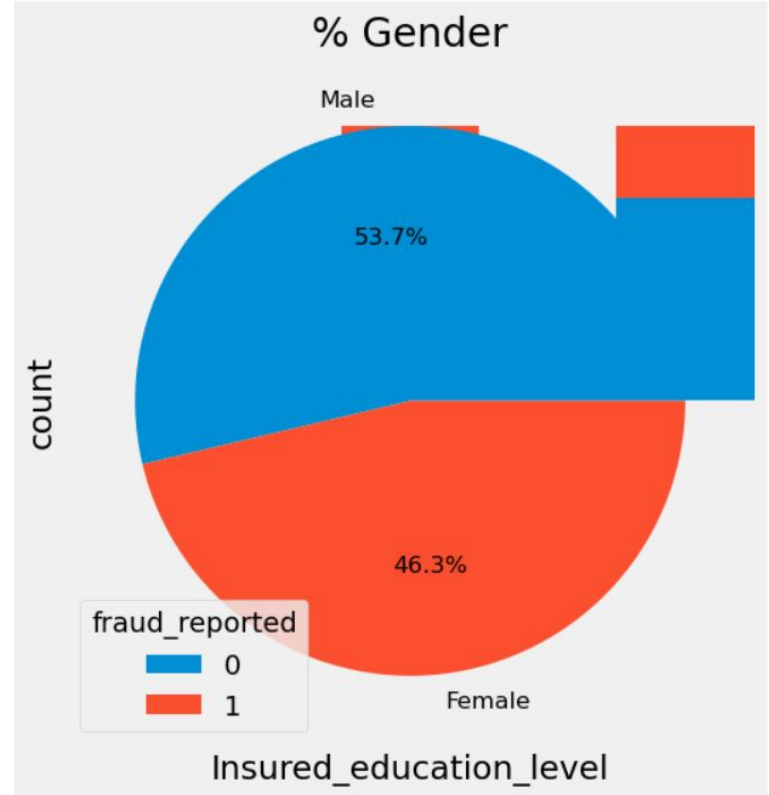
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Objective

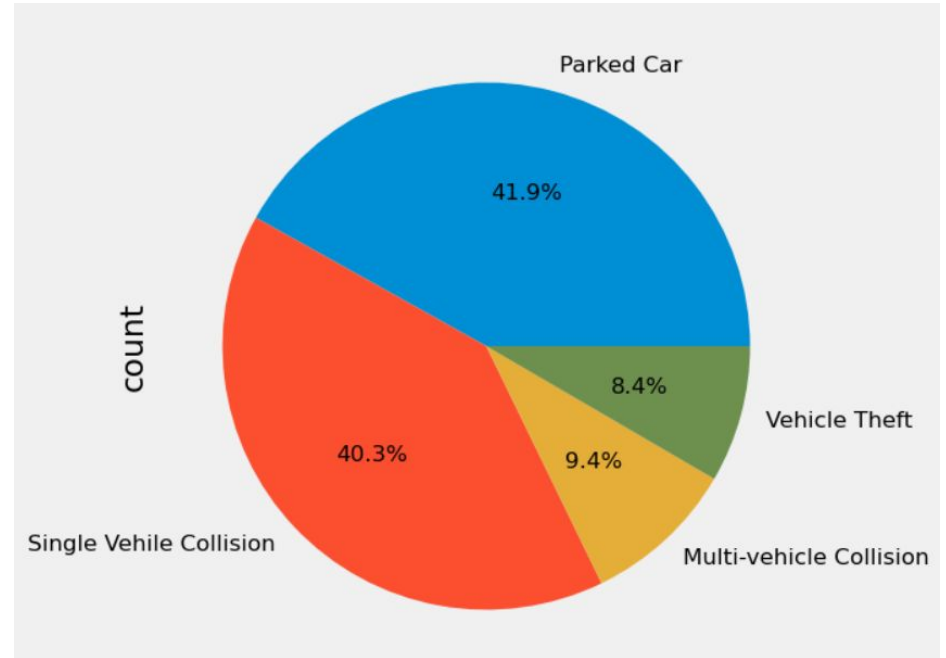
The objective is to build a model to classify insurance claims as either fraudulent or legitimate based on historical claim details and customer profiles.

Key takeaway

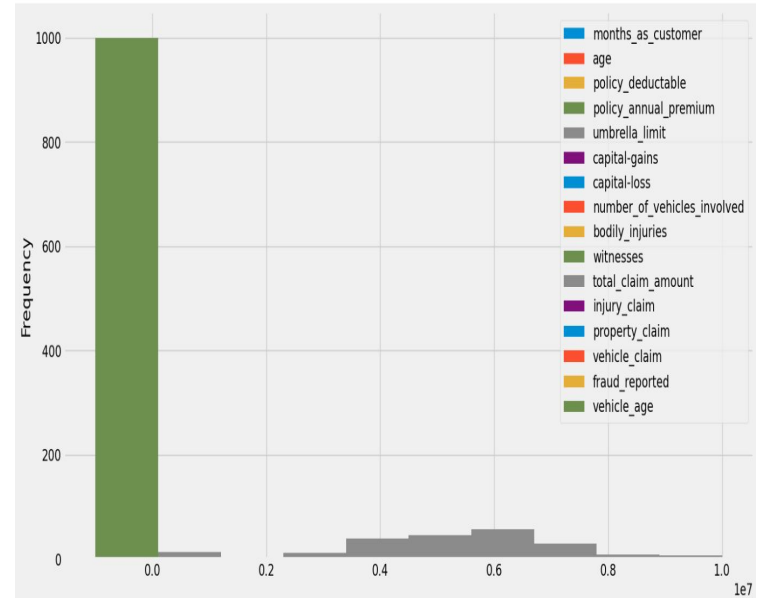
It is observed that more number of males have been educated about insurance



Among the insurance claimed nearly equal number of cases arise from parked cars and single vehicle collision



With respect to the frequency of fraudulent and the factors it is clearly observed that vehicle age has a significant impact on The fraudulent.



Confusion matrix analysis

From the confusion matrix we see that,

- 121 transactions were classified as valid that were actually valid
- 8 transactions were classified as fraud that were actually valid (type 1 error)
- 28 transactions were classified as valid that were fraud (type 2 error)
- 43 transactions were classified as fraud that were actually fraud.

$$\text{Err} = \{(28+8) / (121+8+28+43)\} * 100 = 18\%$$

So, the algorithm misclassified 18% fraudulent transactions.