Car Insurance Predictions

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Agenda

- STAKEHOLDERS
- WHAT IS GOAL
- ACTUAL DATA
- VISUAL PRESENTATION TO OUR KEY FINDINGS
- STRENGTHS AND LIMITATIONS
- FINAL RECOMMENDATIONS

Stakeholders

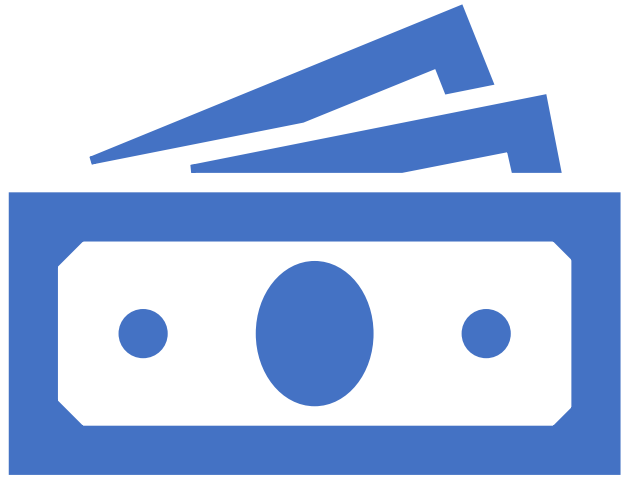
- They are all those who can be affected directly or indirectly by the changes that can happen in insurance industries , and they are:
  - Clients
  - Employees
  - Manager
  - Owners of a car insurance company in Southern Africa.
  - Investors to the company

Primary goals

The goal for this prediction is to reduce financial uncertainty and make accidental loss manageable

By keeping track of the following:

- Who is more likely to claim from insurance
- What factors that can contribute to the claim and how can they be minimized.
- How can the insurer be assisted in minimizing fatalities and saving them money.



Actual data

The dataset used in this prediction has been sourced from website: https://www.kaggle.com/datasets.

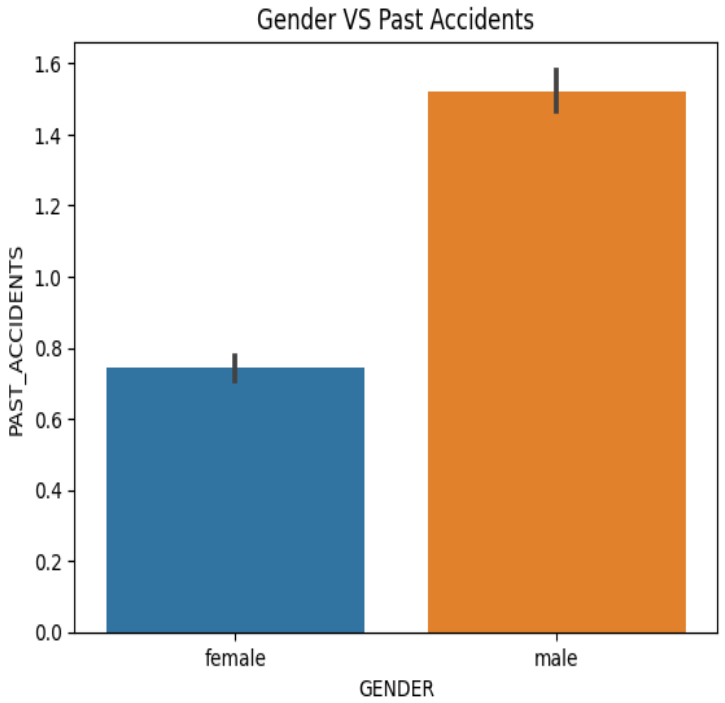
The data is used for predicting whether a client will put a claim or not

Dataset is well balanced, it has personal (age, gender, race, marital status), academic, past driving behavior information.

Visual Presentation Of Gender vs Past Accidents

The graph clearly shows that male are more likely to claim from the insurance by looking at their past driving behaviors.

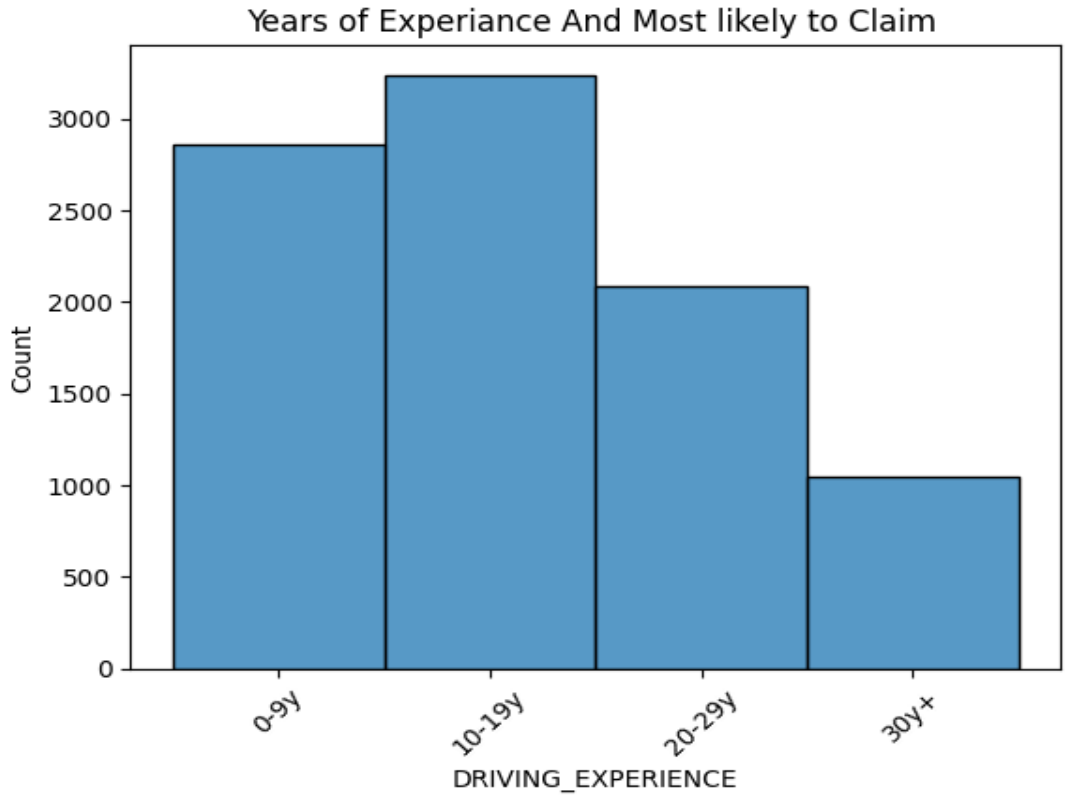
- Males causes more accidents than females.
- Males are more likely to drive under the influence of substance.



Visual Presentation in Years of Driving Experience

The graph clearly shows that with years of driving experience, they are less likely to cause accidents that will lead to claiming from insurance.

These findings are not gender, race based but are more aged base

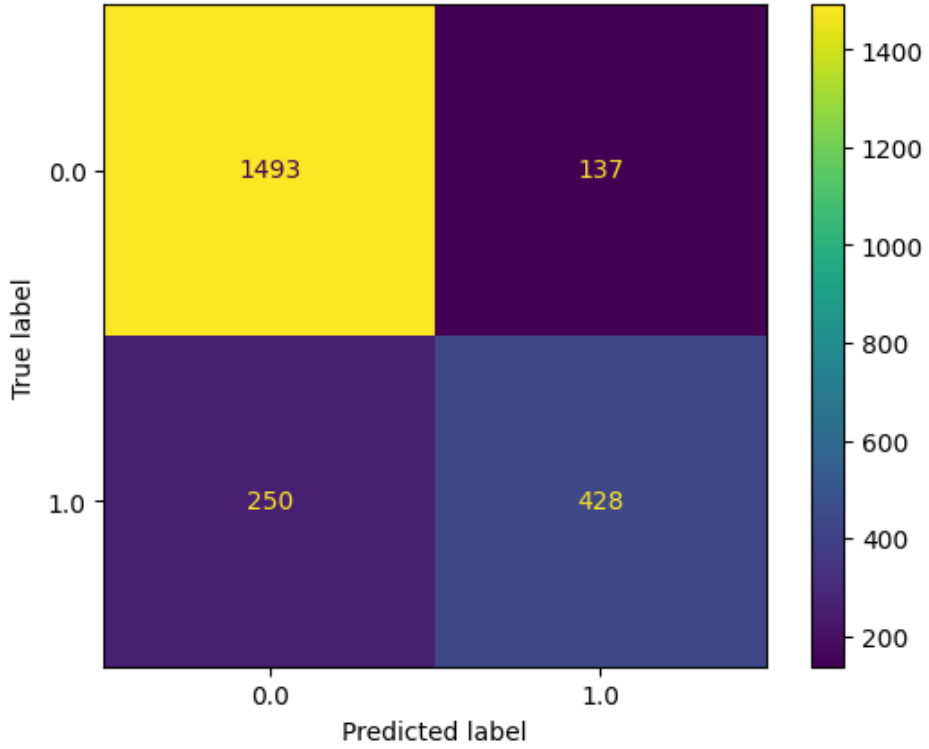


Strengths and Limitations of the model

- The model hear was able to successful predict that 1493 clients won't claim from the insurance and 428 will claim by looking at the trends and the behavior of each client ~ strength

- Its limitation was when it predicted falsely 250 will not claim from the insurance mean while they did claim, and this is error that needs to paid more attention to because company loose money with this type of error.

The overall accuracy for this model is 83 % in a test set of total of 2308 records, roughly the model did very well.



Final Recommendations

Even though the model has its own limitations, but Logistic Regression was able to do much better than other model we tried. It will able to give good predictions with little focus errors.

Thank you

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