

VEHICLE INSURANCE FRAUD

CASE BACKGROUND

The Auto Insurance client observed a steady monthly increase in claims filing, and wanted to reduce susceptibility to fraud. Their Control model was traditional and didn't adapt to the newer techniques such as AI driven data mining and real time ML implementation in claims processes. Consequently, the Control model performed poorly in detecting and relating patterns with sudden spikes in higher volume and high value claims.

Due to an ineffective existing fraud detection and prevention techniques, the average time per claim processed had been on the rise, resulting in higher premiums being charged to genuine customers, and an overall loss of good will in the market. The client wanted to revise its existing fraud detection models and techniques with the goal of making them effective and efficient, and capable of keeping up with the fraudsters.

After considering the existing fraudulent claims, the following were the key focus areas to model development:

1. Identifying fake or superficial road accident insurance claims and rejecting them
2. Identifying suspected auto insurance fraud and flag such customers
3. Carrying out risk trajectory analysis to identify fraudulent patterns and networks in data and append the findings to existing rules

CHALLENGES FACED

1. The client was mildly hesitant in testing the proposed technique incorporating AI and ML due to following reasons:

2. New fraud rejection model would have immediate impact on claim settlement ratio which beyond a certain margin, may result in genuine claims being rejected by the model. This would raise a need for a manual underwriting process which is an additional cost to the client
3. The new model incorporates multiple search algorithms which would require much higher and significantly better computing bandwidth.

SOLUTION

- Rule-based decisioning model was developed using AI and ML techniques and implemented to effectively identify and reject fraudulent claims
- Large volume data cube - historical and current data – was prepared and maintained which promoted better fraud pattern matching
- Final model was developed using expanded set of variables such as:
 1. Customer Application Employment and Income Details
 2. Claim Details
 3. Claim COP Details
 4. Loss Information

You can learn more about our value added services relating to rules-based systems, including integration with frontend applications by going to the [Fraud Analyser page](#) here.

RESULT

AI and ML driven rules continues to validate and add to data cube in real time fraud detection fraudulent claims reduced by ~50% within 6 months of strategy implementation.