



EXL EQ 2019

January 2019

XYZ is a leading general insurance provider in Australia. It serves its customers through two different lines of business – Commercial and Personal. The products provided by the firm to the customers are mentioned in the table below.

Commercial Products	Personal Products
Business Packages, Farm & Crop, Commercial property, Construction & Engineering, Commercial Motor and fleet motor, Worker's compensation, Professional Indemnity	Personal motor, home & contents, lifestyle, boat, motor

Resolving claims is one of the most critical aspects of XYZ's business and it has direct implications for the XYZ's bottom line. However, claim resolution also is subject to critical scrutiny by regulatory authorities and can be a source of compliance risk if not handled effectively. XYZ cannot afford to pay off wrongful claims because of large payouts. At the same time, it cannot reject rightful claims without incurring huge regulatory and brand risk. Thus, a robust claim resolution process is critical to success of XYZ.

Once the insured party applies for a claim, multiple checks are done before final payout. This includes verifying policy coverage, possibilities for subrogation, fraud checks etc. There are multiple laws and regulations governing the claim resolution process and related financial reserves conditions. This limits the flexibility of XYZ and traditionally claim resolution process has been a tedious and time-consuming one, having adverse implications for consumer experience. In XYZ, claim verification process especially fraud detection has been traditionally based on expert evaluation and rule based verification. Such method in addition to being time consuming are also fraught with human error and ability of smart criminals to avoid rule based checks. However, recent technological disruptions in field of RPA and Insurance Analytics has helped reduce lead-time associated with claim related processes and created opportunities for significantly improving consumer experience. This has led to new competition in insurance space to differentiate offerings and build leaner business models.

In light of these disruptions, XYZ is working towards improving its fraud detection process in terms of accuracy as well as the time taken for the entire process. It is trying to employ emerging To assist XYZ in achieving its goals, you have been assigned the following tasks related to claims on motor insurance

- Task 1 –Identifying key characteristics of a fraudulent claim

By looking at past fraud behavior, analyze the key attributes required to determine the likelihood of a fraudulent claim.

- Task 2 – Devising a fraudulent claims detection mechanism

You need to create a mechanism that can detect cases of fraud based on the data by XYZ. The mechanism should have sound business and technological basis.

XYZ has provided you the data with following information:

- Policy Holder Personal data: Sex, Marital Status, Age etc.
- Policy data: Policy Number, Policy Type, Deductible etc.
- Claim data: Accident Area, Claim Date, Fault etc.
- Vehicle data: Make, Vehicle category, Vehicle Price etc.

Also, build model considering that it should be able to answer following questions:

- Is there any certain time period during year/month/week during which there are more fraud claims?
- Form a criteria based on the Policy holder's personal information like age, sex etc. to determine fraudulent claims?
- What pattern can be drawn on amounts like Vehicle price, Claim Amount etc. from past fraud behaviors?
- How does past number of claims, police report filed, and witness present, Policy type effect the chances of claim to fraud?

You will build an algorithm that will support all offerings that XYZ has on his roadmap and help the center turn around their revenue numbers.

The following output is expected from you on this case study:-

For the given data, answer whether the claims are fraudulent or not (Fill column 'FraudFound_P' in response sheet) and list the methodology on how they are identified.

Please use EXL_EQ_2019_Output_Template_Round1.xlsx only for your responses