

# Insurance claim rejection

Identifying fraudulent or incomplete claims

Claim management accounts for a large sum of costs for insurance companies. The rejection model delivers an overview of claims that may be fraudulent or incomplete. This model can lower legal costs and identify common claim issues.

## The Challenge

Most insurance companies deal with the burden of large costs associated with claim management. To produce an accurate outcome, claims must be gone through diligently, with all relevant information considered. Incidents such as natural disasters can significantly increase the number of claims received in a specific period, drive up claims management costs, prolonging response times, and lowering customer satisfaction.

## Data Describing Your Customers

A predictive model that identifies incomplete or fraudulent claims needs access to data from a past list of filed claims, the decisions made, and the customers' services. This information includes:

- Customer profiles
- Information about the insurance product
- Variables about the claims
- Historic data on claim rejection or acceptance

Variables should be available in the historical data,

but they also have to be generated each time a rejected claim is computed. It is essential to select variables that can generate for each new claim. The historical data is usually supplied in databases via a connection, an API, or as .csv files (especially for PoC's). Predictions are generated by sending a JSON request to the model's API and receiving a prediction list.

## Model – Insurance Claim Rejection

Insurance claim rejection uses a supervised classification model trained on historical data to recognize the label assigned to the training data. The model is deployed using the auto-deployment functionality in our enterprise AI platform, Grace. After the deployment, data is sent via a POST endpoint of an exposed API to the model.

The insurance claim rejection model is available as a Grace Standard Model and is a fast track to your first AI model implementation without sacrificing future flexibility or extensibility for scaling AI across your organization. We maintain algorithms that are 70% ready-made and fitted to your data.

## 3 Facts About The Model

1

**Claim rejection as a standard model is a fast track to AI model implementation.**

2

**The model uses data from filed claims, customers, and services to predict which to reject.**

3

**The model enables you to run more accurate operations.**

### Predictions Of customer Behavior

When buying the Grace claim rejection model, historical predictions and model insights are stored and visualized in a BI-tool. The Grace Standard Model framework also delivers insights into the reasons for the prediction used to understand why the company should reject a claim. In this case, 2021.AI can help set up the BI dashboards to give customer service an updated overview (e.g., in Power BI).

### Our Solution

2021.AI offers Grace Standard Models for claim rejection by using a supervised learning algorithm. The mathematical model is trained on a data set, describing customers, services, and claims, together with a label (supervised) that classifies the case as a rejection or not.

The model stores the customer profile and claim filings associated with a high risk of claim

rejection, along with the descriptive variables most likely to classify the cases. While predicting the probability of a claim being at risk, the model also produces insights for each prediction. The model is no longer a black box, as we know which variables drive the model prediction and the main reason for the rejection. In our standard model, we store these insights alongside the predictions to be re-used and displayed in a BI dashboard for further analysis.

### The Business Outcome

Using the Grace Standard Model for claim rejection, the company gets an overview of the likelihood that a filed claim is at risk to be fraud, incomplete, etc. and needs to be rejected. With this information, the company can focus on problematic claims and lower its legal costs. Furthermore, the company gets insights into common issues and tricks used in filed claims, and with this information, it starts to change customer targeting and improve the service.

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