2021.AI

Fraud prediction

Classifying fraudulent
transactions

Financial fraud accounts for a significant amount of monetary losses globally. Knowing the likelihood of fraud in a transaction can enable companies to lower fraud rates by transaction prevention or through conducting efficient screenings.

The Challenge

Experts suggest that online credit card fraud alone will reach $30 billion in 2020 globally. Fraudulent activity is becoming dynamic and complex to a point where relying on rule-based systems will not provide adequate coverage. Knowing the likelihood of fraud in a transaction, as well as the drivers behind it, can enable the company to lower its rate of fraud through preventing transactions or conducting more efficient screening.

Data Describing Your Customers

To build a predictive model that detects fraud in transactions, you need data on the current customer base, the services that the customers have bought, information defining the transaction, and whether or not the company has recognized his customer transaction as fraud in the past. This information includes:

• Customer profile information
• Transaction details
• Fraud status (yes or no)

All variables need to be available in the historical data, but they also have to be generated each time the model should predict the fraud probability of a customer/transaction. Therefore, it is essential to select variables for each new customer and transaction. The historical data is usually supplied in databases via a connection, an API, or as .csv files. The predictions are generated by sending a JSON request to the model's API and receiving a list containing the prediction.

Model – Fraud Prediction

We use a supervised classification model for fraud prediction, 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 fraud 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

Fraud prediction as a standard model is a fast track to AI model implementation.

2

It uses customer data and transactions to predict the likelihood of fraud.

3

Enables you to prevent fraudulent transactions.

Predictions Of Fraud In Your Business

When buying the Grace fraud prediction model, historical predictions and model insights are stored alongside the predictions and visualized in a BI-tool. The Grace Standard Model for fraud prediction also delivers the reason for the given prediction, which can help you understand why a customer may discontinue a product or service. In this case, 2021.AI can help set up the BI dashboards to give customer service an updated overview (e.g., in PowerBi).

Our Solution

2021.AI offers Grace Standard Models for fraud prediction, by using a supervised algorithm. This means, that a mathematical model is trained on a data set, describing the customers and the services bought, as well as transactions, together with a label (supervised) that classifies the case as a fraud case or not.

The model stores which customer profile is associated with fraud, and which of the descriptive variables are most likely to classify the cases. While predicting the probability of being fraudulent, the model also produces model insights for each prediction. This means, that the model is no longer a black box, but instead we know which variables drive the model prediction, and the main reason for the customer to fraud the company. In our standard model, we store these insights alongside the predictions, so they can be re-used and displayed in a BI dashboard for further analysis. For this we connect the BI-tool of choice (e.g. Power BI) to the model API.

The Business Outcome

By using the Grace Standard Model for fraud prediction, the company gets an overview of the likelihood of fraud in a transaction. The company can then direct its screening efforts to those customers which have a high risk of fraud. Furthermore, the company gets insights into what drives fraud and with this information, start to change in order to lower the rate of fraud by screening more effectively.

Interested in taking AI into production? **BOOK A DEMO** **DOWNLOAD OUR BROCHURE**