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7-Step Predictive Analytics Project Methodology

Apply this seven-step methodology to any case to answer the simple question: what will the behavior of the future be? In this case, we are applying it to fraud detection.

Step 1: Define the Problem:
This is a crucial step. Make sure you are thinking about data that supports the problem, not just the data you have. Make the target analysis clear between those asking and answering the question.
- **Fraud use case:** How to determine whether a credit card payment may be a fraud or not

Step 2: Collect the Data:
Another critical step is to collect the data that supports Step 1. Data is the roots and the sap of a predictive analytics project. This is where all the necessary data is collected.
- **Fraud use case:** Collect all transaction data no matter if it has been recognized as fraudulent or not

Step 3: Prepare the Data:
Cleansing, recording, modeling, transposing, and analyzing: these are just some of the actions that can be performed on data to prepare it for predictive analysis.
- **Fraud use case:** Credit card data is cleansed for analysis

Step 4: Perform Statistical Analysis and Feature Engineering:
Data is analyzed to directly test previously developed hypotheses or extrapolate insights by visualizing the various metrics.
- **Fraud use case:** Outlier study, response analysis, and data balancing

Step 5: Build Predictive Models:
After carefully preparing the data, the various predictive models can be tested, and the necessary experiments performed to obtain a model with satisfactory predictive capabilities. Model testing and validation can be performed using various techniques (e.g. dividing the datasets into training sets and test sets).
- **Fraud use case:** Find the best model to predict fraud

Step 6: Evaluate the Models:
Also very important is the performance evaluation phase of the models, which depends on the specific characteristics of the variable to be predicted.
- **Fraud use case:** Fine tune and evaluate model performances

Step 7: Release Into Production:
After all the necessary tests have been performed, the goodness of the models assessed and the output data validated, the predictive analytics model can finally be released and used.
- **Fraud use case:** A validated method to detect fraudulent transactions

You have data. We have solutions. Imagine the possibilities.

Talk to Minitab Today!