



Case Study



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About Client

Client is the state's Montana largest workers' compensation insurance company, protecting approximately 25,000 businesses, organizations, and their workers. Its carrier of choice and industry leader in service. It is committed to the health and economic prosperity of Montana through superior service, leadership, and caring individuals working in an environment of teamwork, creativity, and trust

Objectives:

- Targeted claims reduction program was planned for medical only and indemnity policies
- Future claim count range was predicted for each policy holder for different types of injuries within next 3 and 6 months
- Future claim amount range was predicted for each policy holder for different types of injuries within next 3 and 6 months

Approach

- Identified all the relevant data points which could serve as important attributes, from the available pool of data; policy level, customer related and claims level data
- Built automated data pipelines to create an analytics data lake on a Big Data platform
- Missing value treatment, outlier detection, variable encoding and feature engineering were few of the steps done before the final model build
- Built cascaded multiclass classification ensemble models on the pre-processed data:
 - Model 1: A binary policy level model to predict whether a policy holder would apply for a claim or not
 - Model 2 (Worked on model 1 output): An injury type level model to predict claim count and amount
- Integrated and operationalized model output on client's servers

		F1_score	Precision	Recall
Medical claims	Count	62%	65%	60%
	Amount	66%	62%	71%
Indemnity claims	Count	65%	63%	68%
	Amount	68%	67%	70%

Outcomes

- The business was able to provision for future with visibility of future claims amount and count
- Injury level forecasts helped the business to improve on their product specifications
- The policy holders were targeted with personalized campaigns based on their propensity buckets

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Contact Us:



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