

## TREXIN CASE STUDY

# IDENTIFYING HIGH-RISK CLAIMS AT FIRST NOTICE OF LOSS

*Trexin helped a medical malpractice liability insurer use machine learning to target \$4.3M in annual savings.*

## BUSINESS DRIVER

Our Client, an innovative medical malpractice liability insurance company, estimated that identifying high-risk-of-indemnity cases at first notice of loss and then proactively managing those cases sooner could save them over \$4 million annually, both for indemnity as well as legal and related expenses. But reviewing new cases was entirely a manual process that required highly compensated, skilled personnel. Additionally, these highly skilled personnel were already over-leveraged working on the most complex cases. As a result, most new claims were not being reviewed at first notice of loss and therefore not proactively managed. To improve performance, the CIO asked Trexin to develop an automated solution that would review new claims daily to identify high-risk cases that could then be prioritized for early intervention.

## APPROACH

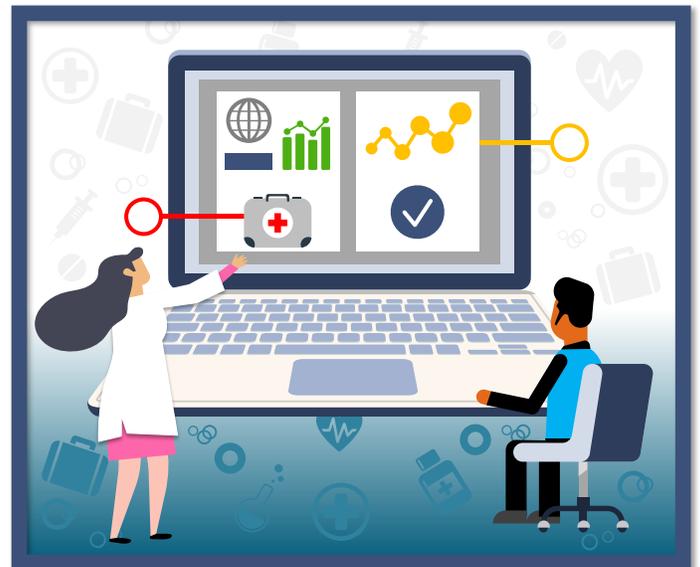
In considering solution architecture alternatives, Trexin was immediately challenged by our Client's request to develop a solution in an accelerated timeframe, specifically within three months. But based on input from subject matter experts, a large number of variables and rules were required to correctly identify high-risk claims at first notice of loss. Yet the personnel with that subject matter expertise had limited availability to work with the project team to define and validate the business rules.

To address these challenges, Trexin recommended and designed a machine learning classification model for high-risk claims identification at first notice of loss. The machine learning model eliminated the need for subject matter experts to be available during development because the model was able to systemically "learn" the rules itself based on historical claims data. The solution was developed very rapidly, and because a machine learning model was used, the solution was forward-adaptable without the need to ever re-program rules.

## RESULTS

The first "notice of loss" machine learning solution developed by Trexin had a level of predictive accuracy that far exceeded the Client's previous capability. As a result, the machine learning capability gained strong endorsement from the claims team and senior management. Over the following three months, our Client deployed the machine learning capability as part of their daily production process along with a rollout program for the initial pilot claims team.

Trexin's proactive machine learning development process enabled our Client to move to an automated and fully production-deployed solution in six months resulting in near-term return on investment and payback for the initiative. In less than one year, our Client was well on their way to taking down an estimated \$4.3M of indemnity and expense payments from their bottom line.



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