TESSERACT MACHINE LEARNING CASE STUDY:

How Signet Pre-Employment Screening used Automated Crime Classification to Reduce Costs, Increase Accuracy, and Improve Efficiency

TESSERACT Machine Learning is a highly flexible and customizable machine learning solution. It can act on any structured data to perform regression, sentiment analysis and categorization. TESSERACT Machine Learning currently powers our Crime Classification solution. The team at Convergence Research can build customized machine learning applications based on client need.
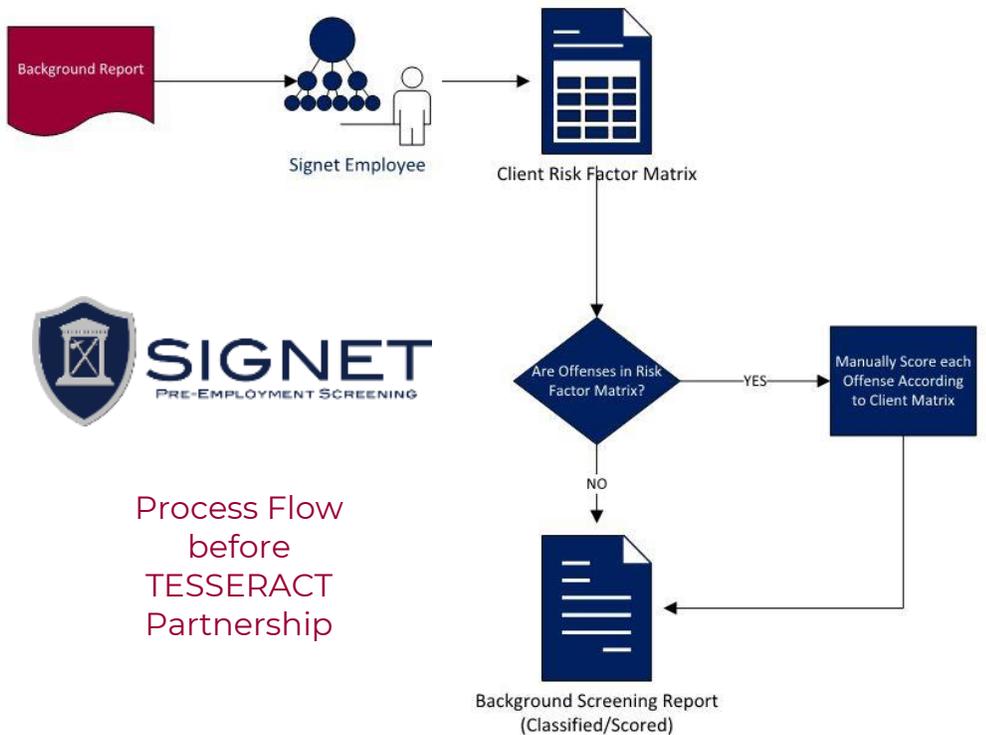
Situation at a glance

- Signet Screening is a national background screening company with clients in many industries, including: Healthcare, Retail, and IT

- Signet began manually classifying crimes based upon a customer request

- Tesseract ML allowed Signet to provide risk factoring to their clients at a fraction of the cost with increased efficiency and accuracy

- By the numbers:

    o **85% reduction in costs** associated with manually risk factoring

    o **99.7% classification** accuracy rate
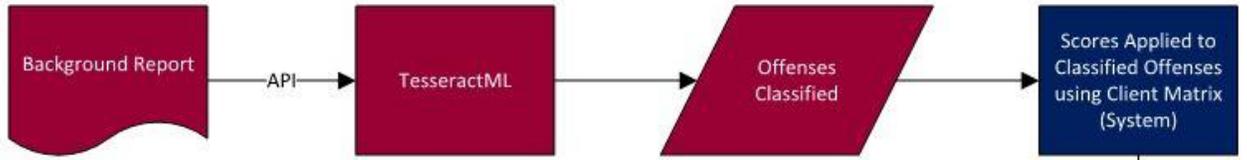
    o **Saved 12.2 hours** in TAT

Challenge

In March of 2018, Signet Pre-Employment Screening was asked by a long-time Client if they could classify charges and crimes by type (e.g. violent, property, etc.), so that hiring managers could save valuable time by easily screening out applicants who didn't meet the company's employment requirements. In response, Signet devised a plan to manually "score" each criminal background report according to the customer's own risk guidelines. While the customer loved the new "scored" reports, Signet quickly realized that the process was taking too much time away from their Customer Service and Quality Assurance teams. They needed an easier, more effective way to analyze the criminal records reports before delivery to the customer.

Process Flow before TESSERACT Partnership

Process Flow after TESSERACT Partnership

Background Report → API → TesseractML → Offenses Classified → Scores Applied to Classified Offenses using Client Matrix (System)
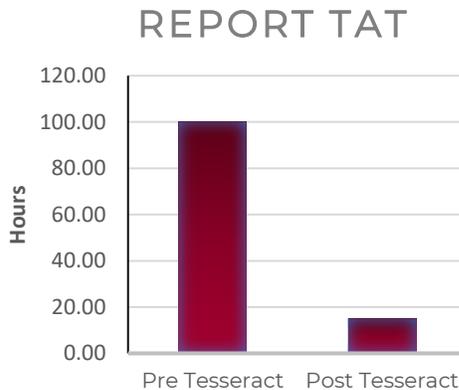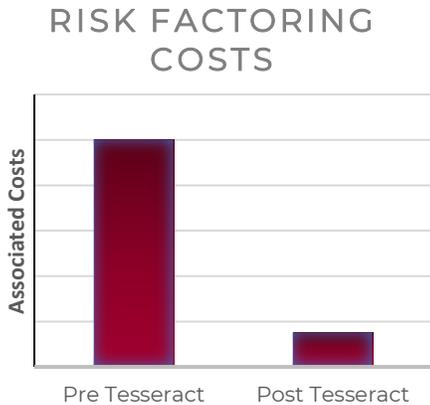
Solution

The Signet and Convergence teams worked together to deploy the TESSERACT Machine Learning Crime Classification solution, which is a powerful risk factoring application that automatically classifies crimes and charges according to individual customer use case requirements and formatting needs. The data were instantly scored using a defined risk matrix created by Signet's customer, allowing Signet to improve accuracy and efficiency, and reduce per screening costs.

Signet Employee Reviews Results

Background Screening Report (Classified/Scored)

Results

Signet is now able to confidently provide their customer with a scored criminal report at a fraction of the cost and time associated with the manually classified reports. In addition, Signet was able to redeploy their internal resources to focus on more productive customer engagement activities. By utilizing TESSERACT's automated Crime Classification solution, Signet achieved an 85% reduction in costs associated with Risk Factoring, and improved report turnaround time by an average of 12.2 hours--all with near perfect (99.7%) accuracy. It was clear they found a solution brought additional value to their client and helped to further differentiate their services from other CRAs.

Interested in learning more?

The customer solution solved by TESSERACT above is one of many use cases for Convergence's Machine Learning software. If you are having a similar challenge or any data associated challenges, reach out below and learn more about how Convergence can potentially help.

Learn more at:

TESSERACT Machine Learning

RISK FACTORING COSTS

Pre Tesseract   Post Tesseract

REPORT TAT

Pre Tesseract   Post Tesseract