

## CASE STUDY

# MACHINE LEARNING For Trading Compliance

*Case study for automated trade surveillance via machine learning.*

## The Challenge

- > The Trading Compliance team at a large Canadian bank required a solution for automated surveillance of all of their fixed income and foreign exchange trades, in order to allocate more time to investigating suspicious activity
- > Rapid increases in market and trade complexity, as well as transaction volumes, have rendered manual surveillance processes obsolete
- > Growing a compliance team of domain and subject matter experts is challenging and costly
- > Existing trade surveillance systems produce numerous false positives, reducing the time a compliance officer has to analyse suspicious activity
- > The bank must address these surveillance challenges in order to avoid increased compliance risk and regulatory scrutiny

## Solution

- > Alithya consultants recommended a machine learning approach to automate aspects of human judgment required for trading compliance
- > Our consultants guided the compliance team in the creation of training sets necessary for the machine learning algorithms
- > Alithya delivered a machine learning solution to reduce false positives in trading compliance alerts

## Business Results

- > Reduced false positive Parking, Wash Trade, and Fair Pricing Alerts by over 76% for all 2018 Fixed Income Trades
- > Reduced false positive Benchmark Manipulation, Free Riding, and Spoofing Alerts by over 90% for all 2018 Foreign Exchange Trading
- > The solution led to significant reductions in the number of false positive alerts in 9 classes of Fixed Income as well as alerts in 10 classes of Foreign Exchange across trades from Canada, US, APAC, and the UK.

## Other Opportunities

- > Any organization in which a rules-based system generates false positives that require further manual investigation and analysis
- > Anti-Money Laundering
- > Credit Card Fraud Detection