First Party Fraud Custom Machine Learning Model

Business challenge

The client was experiencing higher than usual fraud losses and their current score did not enable them to take adverse action. They needed an explainable, transparent model that:

- Enabled them to take adverse action
- Improved the customer experience
- Could be deployed quickly in order to reduce fraud losses

Solution

- Developed a highly-predictive, explainable first party fraud machine learning model and provided the client with the model IP for on-site implementation
- Deployed the XGB machine learning model in PowerCurve
- Deployed Premier Attributes and Trended 3D with IP in Attribute Toolbox
- Machine Learning Explainability IP was applied to this model and up to 5 additional ADS custom models developed during the next three years
- Engagement included ongoing model validation and tuning as needed

The client is a card processor for private label, co-branded, and commercial card programs for retailers.

Results

$36M

in reduced fraud losses annually (ROI: 7 to 1)

Machine learning custom model outperformed the logistic regression model by 37%

Detection rate at review rate of 1%

Generic PID V2 (incumbent score)	7.8%
Generic PID V3	8.6%
Custom LogReg GLB/FCRA	11.5%
Custom LogReg AA	11.2%
Custom XGB AA	**15.3%**

Highly predictive, robust model enabled better decisioning and provided the client with an adverse actionable model that improved transparency and the customer experience