H2O.ai

AI Improves Profitability at Paraguay Bank

VISION Banco

Highlights:

✓ Reduce time to build models from 6 months to less than a week

✓ Increased accuracy of models

✓ Doubled customer propensity to buy

✓ Increased revenue

> *With Driverless AI, we gain more time because we accelerate the process of building predictive models—and with better accuracy. In the past, you could average 6 months or more just for the process of building the models. Now it is less than a week!*
>
> *– Ruben Diaz, Data Scientist at Visión Banco*

Executive Summary

Based in Asunción, Paraguay, Visión Banco provides financial services to small and micro-sized companies in its home country. The bank offers credit card services, remittances, utility and tax collection services, pension plan contribution plans, and payment transfer services. Data scientists at Visión Banco were performing business intelligence using traditional techniques, such as dimensional modelling and moving data to a warehouse using extract, transform, and load (ETL). The team knew it needed to expand its services and offers to customers, easily determine credit risks, and do so with accuracy and speed. It also wanted to enhance its practices by implementing predictive analytics, such as to predict customer payment default or churn.

Challenges

In order to expand its services and offers to customers, easily determine credit risks with higher accuracy and speed, as well as enhance its practices by implementing predictive analytics, Vision Banco knew it could not do so at scale without a new tool or plan. The data science team first hired an external consultant who developed a model using IBM SPSS Software, a process that took a year. Then the team started using open source tools R, H2O, and Openscoring.io, which allowed the data scientists to deploy models in Predictive Model Markup Language (PMML) format—an industry standard for data models. Yet predictive analytics were still taking considerable time and effort.

Solution Powered by H2O Driverless AI

Visión Banco eventually used H2O Driverless AI, H2O.ai's automatic machine learning platform to address these challenges. H2O Driverless AI empowers data scientists and data engineers to work on projects faster and more efficiently by using automation and state-of-the-art computing power to accomplish tasks that otherwise can take months. Deployment can potentially be reduced to hours or minutes by delivering automatic feature engineering, model validation, model tuning, model selection and deployment, machine learning interpretability, time-series, natural language processing (NLP), and automatic pipeline generation for model scoring. At Visión Banco, the H2O software runs on IBM Power System AC922.

"When we switched to H2O we changed the way of deploying models too," explains Diaz. Visión Banco switched from PMML format to H2O's MOJO format.

Results

Since deploying H2O.ai's software on IBM Power Systems, Visión Banco's data scientists have saved time and increased revenue by building and deploying models that improved the accuracy of the credit risk model and have doubled the number of customers who've bought a credit product. Using H2O, the bank doubled its customer propensity to buy rate. With better targeting, the number of customers accepting offers doubled as compared with traditional modeling.

By the numbers, Visión Banco saw:

1. Time savings: "In the past, you could average 6 months or more just for the process of building the models," says Diaz. "Now it is less than a week!"

2. Accuracy improvements: With tighter models, the bank estimates it can realize millions in additional revenue by being better able to target offers.

3. Doubled results: The bank doubled its customer propensity to buy rate using H2O Driverless AI.

Next frontier in AI for Visión Banco

Today, Visión Banco is performing additional testing in preparation to migrate or convert all of its models to Driverless AI. It's starting by evaluating historical data and soon will move fresher data in to verify the results.

Key Use Cases at Visión Banco

- Propensity to buy
- Default prediction
- Credit risk scoring

Ready to see it in action?

Driverless AI is helping companies achieve real business benefits using AI. To learn more about H2O.ai and to request a live demo of Driverless AI, visit us at www.h2o.ai.