

H2O.ai for Payments Fraud

- **6X Faster Model Development**
- **30% Decrease in Fraud**
- **10X Faster Real-time Fraud Detection**

Fraud is one of the most challenging problems in financial services. Fraudsters and cyber criminals are constantly changing their tactics, making it a battle to keep up with the latest scams. At the same time, customer relationships and lifetime value are central to growth. Fraud detection becomes a balance between enabling spending, stopping fraud, and closing the loop with customers so they know fraud is happening and that payment companies have their back. Getting this balance wrong has terrible consequences. When customers make legitimate purchases and payments are blocked, they will use other methods, resulting in lost revenues and raising the potential for customer churn.

New data sources from mobile apps and data from third-party providers can help improve fraud detection, but the increase in data size and variety creates new issues for fraud and risk management teams. These teams are already struggling with rules and statistical modeling systems and limited resources.

To put these trends in context, fraud cost US financial institutions almost \$10 billion¹ in 2018 and is a key issue for regulators. Customer acquisition and retention, however, is top of mind for many bank executives with new competitors from fintech startups to technology companies jumping into payments.

“H2O.ai worked closely with us on not only identifying opportunities in our business, but they were true partners in transforming our business and leading us to the path of data and AI transformation resulting in tens of millions of dollars in increased revenue.” - Digital Transformation Leader, Large Financial Service Company




In a recent PWC study², bank executives in the U.S. highlighted regulatory compliance, customer acquisition and profitability as their top three issues. Together, fraud and resulting customer churn can significantly impact profitability, customer trust and regulatory compliance.

Fraud detection using machine learning is now the standard for the leaders in the financial services industry. Leading banks and credit card companies are using the full power of big data and machine learning to find fraud patterns and deploy predictive models that can spot fraud in real-time during transactions. **According to the 2020 Gartner CIO Survey, artificial intelligence/machine learning tools rank as the top game-changing technology in financial services, ahead of data analytics, including predictive analytics.**

“H2O Driverless AI reduced the time to build and deploy models from 6 months to just a month, which was astounding and a timesaver for our team. Not only did we see the time savings with the model we have in production, but we are able to detect fraud 10X faster than any other method or vendor we evaluated reducing fraud by 30%.”
- Data Science Leader, Payments Platform

¹ <https://www.prnewswire.com/news-releases/payment-card-fraud-losses-reach-27-85-billion-300963232.html>

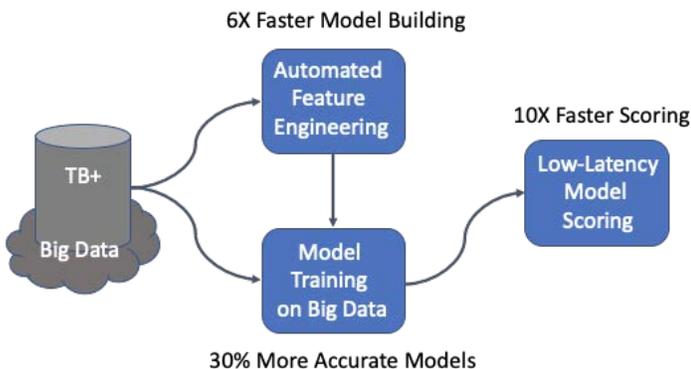
² <https://www.pwc.com/gx/en/banking-capital-markets/banking-2020/assets/pwc-retail-banking-2020-evolution-or-revolution.pdf>

Fraud Detection with H2O.ai

Leading banks, payment processors, and credit card companies use the H2O.ai platform to stop fraud and improve customer experiences. H2O.ai has a unique combination of capabilities ideally suited to prevent fraud and improve customer experiences at the same time. Reducing fraudulent transactions requires having accurate AI models that can respond in milliseconds to detect fraud as it happens. Customer experiences are not only enhanced by preventing fraud but also by minimizing cases when legitimate transactions are identified and blocked as fraud, i.e., false positives. Faster response also allows for customer notification during transactions which can allow for legitimate transactions to complete or stop fraud in its tracks.

H2O.ai customers:

- Build predictive models 6X faster with automated machine learning to detect new fraud patterns before they can do serious harm
- Increase model accuracy by up to 30% by using all available data to find small anomalies in large data sets.
- Detect fraud up to 10X faster with ultra-high-speed scoring to stop fraud as it happens



Using the H2O.ai Platform to Detect Fraud

The H2O.ai platform has a unique combination of automation and big data capabilities that make it ideal for fraud detection use cases.

H2O Driverless AI is a powerful automated machine learning system with a unique, evolutionary model for discovering signals in data that will lead to more accurate production models. Driverless also runs through state-of-the-art techniques to find the best approach for each fraud challenge.

This automated process runs on the most powerful computing environments to discover new data features and techniques in hours, not days or weeks, while fraud occurs.

With these new features and optimized modeling techniques in hand, data scientists can build new AI models using all the available data using the H2O open-source modeling environment.

H2O open source is a distributed, in-memory system that operates on terabytes of data in the largest banks and credit card companies. Using all available data creates the most accurate models. Accuracy is critical for fraud detection to find actual fraud and minimize false results that annoy customers and cause churn.

Having the best model doesn't matter unless fraud is detected in time to prevent transactions from taking place.

The H2O MOJO is an ultra-low latency scoring model that customers can deploy anywhere. This highly optimized approach is ideally for fraud detection, where decisions happen in milliseconds.

H2O.ai gives AI teams in fraud the ability to discover fraud faster, build production solutions more quickly, and deploy AI models that can stop fraud before it happens. This agility to respond to fraud and the speed to detect it in real-time delivers new levels of value to banks and credit card companies by reducing fraud losses and reducing churn.

About H2O.ai

H2O.ai is an open source leader in AI with a mission is to democratize AI for everyone. H2O.ai is transforming the use of AI with software with its category-creating visionary open source machine learning platform, H2O. More than 20,000 companies use open-source H2O in mission-critical use cases for Finance, Insurance, Healthcare, Retail, Telco, Sales and Marketing. H2O Driverless AI uses AI to do AI in order to provide an easier, faster and cheaper means of implementing data science. H2O.ai partners with leading technology companies such as NVIDIA, IBM, Intel, AWS, Microsoft Azure and Google Cloud Platform and is proud of its growing customer base which includes Capital One, Progressive Insurance, Comcast, Walgreens and MarketAxess. For more information about how H2O.ai is driving an AI transformation, visit www.h2o.ai