Financial technology company catches more fraud with Microsoft Azure AI

Customer
Moneris Solutions Corporation

Partner
Airgate

Products and Services
Azure Cosmos DB
Azure Data Lake Analytics
Azure Databricks (AI)
Azure Machine Learning

Industry
Banking and Capital Markets

Organization Size
Large (1,000 - 9,999 employees)

Country
Canada

New threats to commerce emerge each day. Those threats are met and mitigated by companies like Moneris, which supports the payment processing needs for 350,000 merchant locations across Canada. To take a proactive stance against fraud, Moneris needed to expand its ability to reason over vast amounts of data for in-depth analysis. Moving to Microsoft Azure and leveraging artificial intelligence, the company has realized a 450 percent increase in its ability to view and assess incidents, with a resulting 10 percent reduction in fraudulent customer and merchant activities.

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—Ben Salvador-Watts: Director of Data Platforms
Moneris Solutions Corporation

Moneris Solutions Corporation ("Moneris") is Canada's largest processor of debit and credit transactions.* The company was created 20 years ago as a joint venture between the Bank of Montreal and the Royal Bank of Canada in one of the largest collaborative efforts in the history of Canada's banking sector. Moneris has offerings for a wide range of Canadian merchants' payment processing needs, including electronic and app-based commerce, and its portfolio of services is constantly growing.

As the company's services expand, so do the types of threats it faces. "We've seen some pretty dramatic shifts in how fraud presents itself in payments," says Daniel Trunzo, Vice President of Merchant Portfolio Risk Management at Moneris. "To combat that fraud, we've steadily used larger and larger datasets each year, and we make use of more self-sustaining AI programs that help us make sense of that data."

Because Moneris had traditionally maintained its infrastructure on-premises, the company's first instinct was to install new onsite servers to facilitate its growing data storage and analytics needs. However, as the company began to scope the upfront costs of new hardware and its installation, leadership considered moving to the cloud instead. Moneris knew that the demand it would place upon AI would continue to change over time, making it impossible to perfectly estimate the computing capacity required months or years down the line.

With scalability and flexibility in mind, Moneris looked to Microsoft Azure (https://azure.microsoft.com/en-ca/) . "Azure offered us the ability to

incorporate this solution one step at a time and increase our capacity as we grow," says Ben Salvador-Watts, Director of Data Platforms at Moneris. "We were able to operate faster immediately and have the flexibility to iterate and refine our approach to AI as new possibilities present themselves."

A tailored move to the cloud

Before selecting Azure as its cloud platform of choice, Moneris weighed the benefits of each of the major cloud providers available in the region. Ultimately, a familiarity with other Microsoft solutions contributed to the decision-making process. "Moneris believes strongly in our people and building upon that talent base," says Salvador-Watts. "We are familiar with Active Directory and the security features that come with Microsoft products, so we saw the move to Azure as a way to leverage our teams' existing expertise using a Microsoft infrastructure as we expanded and worked with more AI."

To jumpstart the process of training its employees and ensure the implementation of its new Azure infrastructure happened swiftly and professionally, Moneris partnered with AirGate Technologies (https://www.airgate.ca/) , a member of the Microsoft Partner Network. "AirGate impressed us with its depth of knowledge and breadth of expertise right away," says Salvador-Watts. "Throughout our

engagement, they gave us expert advice while also allowing us the flexibility to author our own solution."

Moneris also engaged experts from Databricks (https://databricks.com/) to train them on their Azure Databricks (https://azure.microsoft.com/en-ca/services/databricks/) environment. "Databricks brought experts to us that have built out libraries used across the world for machine learning," says Salvador-Watts. "We learned a lot over our initial five-day stint with their team, and we are working closely with them as we continue to focus on the business value we want out of the product."

Immediate benefits with room to grow

Once deployed, it took Moneris just six weeks to spin up its initial Azure workloads—and it saw immediate results. "One of the objectives of the move to Azure was to use the mountains of transactional data we receive to advance our AI programs related to managing fraud, serving our customers, and improving products and services," says Salvador-Watts. "For instance, if there are unusual changes in a customer's behavior, then we want to identify that activity as quickly as possible."

Using a combination of Azure Data Lake Analytics (https://azure.microsoft.com/en-ca/services/data-lake-analytics/#:~:text=%20Azure%20Data%20Lake%20Analytics%20is%20an%20on-demand,of%20your%20relational%20sources%20such%20as...%20More%20) , Azure Cosmos DB (https://azure.microsoft.com/en-ca/services/cosmos-db/) , and the AI capabilities in Azure (https://azure.microsoft.com/en-ca/overview/ai-platform/) , Moneris has improved the visibility of anomalous activity through the creation of intricate views for its specialized teams as they assess risk. "We used to have to multitask, using multiple screens running a variety of systems to stitch together a comprehensive view of a risk profile, and that took a while," says Trunzo. "With Azure, we've taken all of that away and brought our data into a single view that is consistent across our team, resulting in a 450 percent improvement in the speed at which we can identify the

factors that go into evaluating risk. That shift alone has resulted in a 10 percent decrease in losses from fraud."

How it's done

The Moneris Portfolio Risk Management team completes more than 1,000 risk assessments a day based on 25 to 60 key risk indicators. These indicators are then used to report on the performance of the company's portfolio at both an amalgamated and account level.

Aided by AI, Moneris has created new workflows for a "high-risk-in, first-out" model. The workflows assess the risk level based on the indicators and then prioritize events in a fully automated process. The higher risk events are expedited for review by the team, while low-risk events are scored based on a model and automatically reprofiled as appropriate. As a result, the company is now able to assess a much higher volume of its risk exposure while maintaining its staffing numbers and focus its experts on evaluating complex cases. These methods have improved turnaround times, reduced the portfolio's residual exposure, and granted all of the company's portfolio managers unified insight into risk indicators.

Because of the flexibility Azure offers, Moneris plans to ramp up its AI capabilities, including the automation of risk-mitigating actions across various streams of portfolio sensitivity. "In the past, we operated as a sort of siloed assembly line in terms of deploying new

services," says Salvador-Watts. "With Azure, we're all essentially subject matter experts now. Projects that were once slated as multiyear endeavors can now be completed in a matter of weeks. We've jumped substantively ahead, and we've done so at less than half of the cost of upgrading our on-premises big data infrastructure."

Based on the total number of transactions processed in Canada.

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