EMBRACE HOME LOANS LIFTS MARKETING CAMPAIGN ROI WITH IMPROVED SEGMENTATION

FINANCIAL SERVICES

embrace® home loans

COMPANY	Embrace Home Loans
LOCATION	Middletown, Rhode Island

SNOWFLAKE WORKLOADS USED

- DATA ENGINEERING
- DATA LAKE
- DATA WAREHOUSE
- DATA SCIENCE
- DATA APPLICATIONS
- DATA SHARING

Full-service mortgage lender Embrace Home Loans is focused on providing exceptional experiences to borrowers, referral partners, and financial institutions. Since 1983, Embrace has helped thousands of homeowners purchase and refinance their homes. To maximize marketing campaign effectiveness and streamline operations across more than 45 branches, Embrace ingests and analyzes loan pipeline data and 45 million prospect records.

STORY HIGHLIGHTS:

Fast access to data
Data in Snowflake is instantly accessible to value-generating machine learning models with native DataRobot Zepl and Snowflake integrations.

Ability to scale to millions of records
Snowflake handles Embrace Home Loans' data, users, and workloads—including complex machine learning models that score up to 45 million records.

Machine learning that's compliant with data protection
Snowflake's governance features enable proper data access for data scientists without exposing PII.

> " Snowflake is invaluable. It allows us to control what data is visible and integrate tools, such as DataRobot Zepl, that bring actionable insights to the business team."
>
> **—KEITH PORTMAN,**
> Chief Analytics Officer, Embrace Home Loans

CHALLENGE:

Leveraging machine learning to elevate campaign performance
From millions of raw prospect records, Embrace sought to increase its return on marketing investment (ROMI) by developing machine learning (ML) models that identify customers who have a higher propensity to purchase.

Embrace's legacy data architecture experienced frequent performance issues, was cost prohibitive, and could not easily scale to handle surging ML workloads. Integrating third-party tools and data sources was operationally burdensome and diverted attention from higher impact work. Data silos led to metric discrepancies and interdepartmental confusion. Gaining a holistic view of each customer's interactions across multiple campaigns, channels, and branches seemed impossible.

Data science notebooks were stored locally, which created bottlenecks and delayed Embrace's ability to implement marketing campaigns. "We had to take the underlying ML model code containing up to 60,000 lines of if-then-do statements and SQL and pass it to our execution team for integration into their process," Embrace Home Loans' Chief Analytics Officer, Keith Portman, said.

SOLUTION:

A platform for scalable machine learning
Realizing the need for a modern data environment, Embrace turned to Snowflake as its single source of truth across teams in the organization.

Snowflake's multi-cluster shared data architecture scaled to handle Embrace's data, users, and workloads. Snowflake's extensive network of connectors, drivers, and programming languages aligned with Embrace's hub-and-spoke strategy. Connecting Embrace's

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45 million
Number of prospect records scored

320%
Peak level of return on marketing investment

28.5%
Higher model predictive accuracy based on measured area under the curve

CRM system, loan processing system, and BI tool to Snowflake simplified data collection and sharing. According to Portman, "Snowflake allows us to control what data is visible and integrate tools that bring superb insights to the business team."

Snowflake Partner Connect provided a convenient way to connect to DataRobot Zepl, a data science and ML platform. Managing 200 data science notebooks with DataRobot Zepl reduced administrative effort and increased collaboration. Using DataRobot Zepl to build complex ML models and store them as objects in Python made it easier to score large data sets in Snowflake. "We no longer have to export huge SQL files for ingestion by our campaign execution team. That's a winner," Portman said.

Snowflake's governance features ensured the right data was available in DataRobot Zepl—without exposing PII to data scientists.

RESULTS:

Achieving 320% ROMI with sophisticated ML models

Embrace builds optimized direct mail and email distribution lists by applying sophisticated ML models to prescreened data sets containing up to 45 million records. Sending preapproved refinance offers to targeted prospects yields increased levels of ROMI—as high as 320% during peak market demand. According to Portman, "Data is our currency. It gives us the ability to create razor-sharp models that we use to focus our marketing spend."

Ingesting contact conversion and response data back into Snowflake creates a 360-degree feedback loop for evaluating campaign effectiveness and further refining model accuracy. Since implementing Snowflake and DataRobot Zepl, Embrace has improved its area under the curve (AUC) score from .7 to .9.

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Streamlining the lending process with data

Data stored in Snowflake powers a variety of reports and dashboards that support operational decision-making and continuous improvement. Tracking the flow of loan inquiries, applications, locks, closes, and revenue keeps Embrace's leadership team informed about key pipeline metrics. For example, 60% of Embrace's loans close within 21 days of purchase. "Mapping that out allows us to gain visibility, improve our cycle times, and understand loan officer performance," Portman said.

Aligning sales, marketing, and operations around the customer experience

Enhanced campaign attribution models free up Embrace's loan officers to focus on the customer experience instead of manually tracking lead source information. Maintaining a single source of truth for campaign-related data increases alignment between a variety of departments and teams at Embrace.

> **When you deliver value, people tend to trust what you do. As a consequence, I've been given more freedom to try different types of models and align strategically across different segments."**
>
> **—KEITH PORTMAN,**
> Chief Analytics Officer, Embrace Home Loans

FUTURE:

Customizing the customer journey with data science

Leveraging data in Snowflake to create different journey paths will help Embrace provide a more personalized customer experience. Developing models that consider additional data sets, such as geographic data, will make it easier to match customers with the right loan officers, products, and marketing materials.

Developing APIs will enable near real-time calls to third-party data vendors for faster insights about potential customers. According to Portman, "The journey can be completely customized by getting data back in real time. To create hyper-personalized customer journeys, we will continue to enhance marketing campaign performance with more data from third parties. Snowflake Data Marketplace removes many of the traditional barriers for us to do so."

ABOUT SNOWFLAKE

Snowflake delivers the Data Cloud—a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the Data Cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Join Snowflake customers, partners, and data providers already taking their businesses to new frontiers in the Data Cloud. **snowflake.com**