ANTICIPATING CUSTOMERS' PURCHASING BEHAVIOR

BACKGROUND

Advances in analytics and technology enable companies to access vast amounts of customer data. Creating personalized customer experiences across varied marketing and communications channel is a top priority for a business to remain competitive. In parallel, companies need to reduce churn and improve profitability per customer with increased product adoption.

CHALLENGE

A leading financial services and insurance company we call FSI wants to understand the current financial states and goals of its individual members and anticipate each customer's important life events, preferences and readiness for different financial products and services. FSI uses several digital channels such as web and mobile to engage with its members, which generates information it can leverage to understand customer preferences across each channel. The company also has a multi-product structure and six lines of business with over 700 products. This company principally uses a rule-and model-based system that segments its multi-million-member population into 16 categories according to certain demographics and other relevant parameters.

This traditional segmentation or clustering approach is very limiting in that each customer's financial health journey is broadly categorized and lacks details about that individual's specific circumstances. Therefore, FSI's goal is to move beyond its traditional segmentation and personalize the customer experience for each of its millions of members by having up-to-date knowledge and actionable insights about each individual member. FSI wants to anticipate and serve its customers with the right service or product in the right channel and at the right time.

SOLUTION

The Intel® Saffron™ Cognitive Solution ingested and analyzed five years of data based on several hundred thousand members that was representative of the company's multi-million customer population. Of the available 700+ products, the Intel Saffron Team learned what choices each member made about individual products over a five-year time span. Unlike traditional rules and population-based models, the Intel Saffron Team created high-dimensional "signatures" (weighted customer profiles) from the three selected data sources: (1) member demographics, (2) product portfolio, and (3) channel preferences to anticipate a customer's next best action.

Based on the Saffron Cognitive Solution's unique "similarity analysis" approach, at the individual product and customer level, it was able to generate rank-ordered product recommendations based on our anticipation of what the member would likely purchase next. The Saffron Cognitive Solution further provided the supporting, explanatory evidence for each recommendation—showing the reasoning behind each recommendation.

RESULTS

FSI has a 5-tier product structure. Several major lines of business represent different financial products and services at Tier 1. Under the major lines of business, FSI has 22 lines of business product families (Tier 2), which is where FSI performs the majority of its analytics. Tier 5 represents the product SKU level and therefore includes the most products.

Beginning at the individual product and member level, the Saffron Cognitive Solution demonstrated high accuracy at anticipating a member's next product

Tier Level (FSI company's 5-part product structure)	Approximate Number of Products in each Tier	Average # of Recommended Products to each Member	Predictive Performance (Recall) based on Random Selection	Saffron Cognitive Solutions' Predictive Performance (Recall) based on Random Selection	Saffron Cognitive Solutions' Predictive Performance (Recall) based on member demographics, product portfolio, and channel preferences
1	Less than 10	2.3	38.3	91	93
2	Less than 25	6.5	29.5	68	91
3	Less than 160	8.7	5.6	41	84
4	Less than 200	9.7	5.0	35	79
5	Less than 500	10.0	2.1	26	76

Tier 2 is the level at which FSI company performed the majority of their analytics. The Saffron Cognitive Solution generated "signatures," or weighted member profiles at Tier 5 (the individual product SKU and member level). From here, results were aggregated to reflect the predictive performance at each product tier level. As a result, the Saffron Cognitive Solution enabled the customer to deploy personalization analytics. at each individual member and product level, as required for the company's operational workflow with divisions such as sales, marketing and customer service.

acquisition across the company's five-part product. The table on the left shows the results:

The Saffron Cognitive Solution consistently had high accuracy rates for recommending the correct products across the five tiers. Moreover, the Intel Saffron Team accomplished these results in a 10-week pilot, in contrast to traditional modeling efforts that took over 18 months.

WHY SAFFRON COGNITIVE SOLUTIONS

Unprecedented Accuracy
Provides customers with the highest degree of data accuracy—the proof is in our results.

Full Transparency
Gives customers the explanation and reasoning behind the results of their data.

Learns on Sparse Data
Learns on sparse data so customers don't need volumes of data to get started.

Time-to-value
Customers can rapidly unlock value in their data (i.e., weeks rather than months).

Speed-to-insight
Provides customers faster speed-to-insight to quickly see the actionable knowledge in their data.

Model-free and rule-free
Dynamic and not constrained by rules and models—incrementally learns and adapts in real-time from incoming data and human

High ROI
Proven track record of high ROI for leading enterprises across industries and use cases.

LEARN MORE

To find more information about Intel Saffron Cognitive Solutions, go to www.saffrontech.com.