Consumer Behavior Predictive Analytic System for a Top US Retailer

In today's highly competitive online retail industry, the ability to understand and to forecast what customers want plays a crucial part in the success of these online retailers. A top US retailer was looking to increase its online sales by collecting, analyzing and predicting consumers' online behaviors. The success of this project would not only help to increase its online sales revenue but also to streamline its supply-chain management and ultimately, improving its bottom-line. The development team at Founder was recruited to help architect and develop a Consumer Behavior Predictive Analytic System. Besides successfully achieving the client's business objectives, the deployed solution employs the latest in grid-computing technologies, utilizing the computing powers of thousands of computers sitting at the client's offices across the country.

Client Overview

Our client is one of the Top10 US retailers with thousands of stores across the country. The client was looking to improve its online sales revenue stream by deploying a system that is able to predict and display each of its customers' preferred merchandises whenever the customer visits the client's online store. The client came to us after a previous engagement with another offshore software vendor, which has failed to deliver the desired system.

Solution Highlights

A sophisticated predictive analytic system was developed to achieve the client's business objectives.

- A hybrid (onshore/offshore) team was assigned to this project. Project management and architecture, which included requirement analysis and system design were done onshore together with the client. Meanwhile an offshore team, comprising a delivery manager and several dedicated programmers, were responsible for the implementation and delivery of the system.

- An agile model was employed in which daily requirements and reviews were sent to the offshore team by the onshore team across different continents and time zones. While it was after office hour for the onshore team, the offshore team was hard at work in developing a daily build of the system in time for the onshore team's review the next day.

- A multi-technology system was developed for the collection and analysis of real-time data of customers browsing the client's online store. It was designed to enable behavioral study and management of users and related data in a social network/e-commerce environment. A complex behavioral algorithm was developed to analyze the relationships of huge amount of collected data. Founder provided a research scientist, who is a fuzzy logic expert, for the development of this algorithm.

- The task of collecting and processing huge amount of Internet merchandise data in order to increase the accuracy of prediction was accomplished by employing the latest in grid-computing technologies – utilizing the computing power of thousands of idle computers sitting at the client's offices across the country.

Benefits

The client's online store is now to able to display merchandises which interest its customers the most according to customers' previous shopping experience. Moreover, the data collected through the system helps client to better predict trends and hence, improve its supply-chain management.

Project Snapshot

Industry
- Retail

Client's Location
- Chicago, USA

Services
- Customized Application Development

Implementation Details
- Onshore / Offshore delivery model
- 1 year development
- Team of 25

Technologies
- C# 3.0, .NET Framework
- Window Services
- MySQL

Founder's Success Factors

- **Close tie to Beijing University and other research institutions thus enabling Founder to recruit the country's top research talents**

- **Proven hybrid (onshore/offshore) model that not only ensures effective communication throughout the project lifecycle but also to keep cost down**

- **Flexible delivery process – An Agile model was used for quick turnaround in requirement validations**