

TIBCO Spotfire

Client

Our Client is a software company that specializes in developing solutions that help healthcare organizations to engage and activate patients in a personalized way, for impactful outcomes. They provide a comprehensive portfolio of healthcare marketing solutions such as digital experience management platform, unified lead management, healthcare CRM and reputation management. Their client base includes 1100 hospitals, managing more than 80 MN patient records.

Objective

Congruent worked with the client to develop a unique approach to prospect identification and patient acquisition. The objective is to apply powerful analytics to the rich marketing database of the client so as to create targeted groups of consumers who are most likely to need and respond to service-line marketing campaigns. The premise is that if it is possible to predict what kind of health services an individual might need, it is easier to engage and influence them much more effectively for wellness care.

Challenges

The analytics framework should be capable of handling huge data volumes and should also be customizable for different hospitals. Also, as time is of essence in every marketing campaign, the system had been optimized for best performance to be able to create hospital specific models in the shortest possible time. Further, security considerations meant that data access and storage mechanisms need to be absolutely fool-proof.

Solution

Congruent developed a solution that unifies demographic, clinical, financial and behavioural information to create a consumer data model.

The teams from Congruent and the customer worked hand-in-hand to develop the following solutions:

- Data extraction tools to map, filter and transform structured and unstructured data to make it suitable for modelling
- Master data management to identify and remove anomalies and outliers and to ensure robust data security
- Building models using machine learning algorithms such as Random Forest, Logistic Regression and Support Vector machine. For each campaign, all these methodologies are applied and the final product is decided based on predictive power of each method.
- High-performance data visualization tools to create meaningful visuals of the results

The models use several rich data sources that include

- Three most recent years of campaign data
- De-identified claims data
- Experian data
- HCUP data

Technology Used

Microsoft Parallel Data Warehouse, R, TIBCO Spotfire

Benefits

Leveraging the intrinsic capabilities of the enterprise data warehouse and the analytics technology stack, the solution was able to provide maximum performance and flexibility. For business, this translated in terms of

- Ability to build campaign specific prospect database within 15 to 30 days
- Ability to commit on target identification and ROI. To quote a specific instance, a hospital that initiated a Women's Cardiovascular Campaign was able to identify 46% as high target consumers and achieve a positive 2:1 ROMI based on downstream revenue.