AI/ML BASED CUSTOMER LIFETIME VALUE (CLV) MODELS TO DELIVER ACTIONABLE INSIGHTS FOR A US BASED RETAIL LEADER

Developed and implemented AI/ML based models to assess CLV. Optimized sales strategy and marketing budget.

Client Background

The client is one of the top US based luxury fashion retailers, having 6 million+ customers and 4.5 billion+ USD in annual sales. The client wanted to apply a systematic data-driven approach demonstrating the future value business can generate from their sales and marketing initiatives. CLV models enable predicting customers' future purchase power and scope of profitability resulting into design and evaluation of sales strategies that are more sustainable value creation for long-term.

The key objectives of the client included:

- Different customer segmentation models on revenue per customer, brand affinity, acquisition cost and other metrics to design sales and marketing strategies.
- Predictive CLV model based on the transactional behaviors of customers to forecast what actions, they will take in the future.

Xoriant Solution | Key Contributions

The client needed an automated AI/ML and statistical approach to understand the customer behavior. Xoriant with its strong domain knowledge and expertise proposed a solution that leveraged industry-recognized and widely accepted statistical and AI/ML modeling methods in development, validation, and deployment of the solution to enable the customer's end goals.

The proposed model was capable of:

- Segmenting the premium, loyal and various other customer segments to understand the customer behavior.
- Predicting customer spend for next fiscal quarter and next 12 rolling months, resulting in increased accuracy in future revenue generation estimation.
- Supporting personalized targeting of customers in marketing campaigns resulting in increased overall sales and better customer retention.

KEY BENEFITS

- Streamlined client's Customer Segmentation methodology aiding in better understanding of the end-customer behavior

- Optimized client's ability to target customers for marketing campaigns with a higher hit rate

- Developed and implemented a CLV model that helps optimizing firm's acquisition spending for maximum value

- Enabled client to design an efficient sales strategy with more sustainable budget planning

Our key contributions included:

- Developing consistent methodology for both customer segmentation and customer lifetime value prediction.
- Pre-processing 60 million transactions with 6 million unique customers and applying clustering techniques to create optimal number of customer-segments.
- Producing 6,000 of the latest set of customer attributes and applied SVD based feature extraction for noise reduction through feature engineering.
- Implementing a modular modeling approach allowing addition of new attributes in the future.
- Rolling out version-controlled and well-maintained codes for production ready models.
- Supporting end-to-end pipeline and ensuring fully automated implementation.

Client Testimonial

"Xoriant successfully developed and delivered an automated AI/ML and statistical based models for customer segmentation and CLV prediction"

Technology Stack

AWS SageMaker | Snowflake l SQL | Python | AI/ML and Statistical Models

Xoriant is a product engineering, software development and technology services company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite, and offshore services from our 14 global offices with over 5000 software professionals. Xoriant has deep client relationships spanning over 30 years with various clients ranging from startups to Fortune 100 companies.