ORACLE

Oracle Retail Customer Decision Tree and Demand Transference Science

Retailers today are looking for a more complete understanding of their customers to retain loyalty, improve sales, and grow market share. Customers are constantly communicating with retailers with their purchase patterns, shopping preferences, and behaviors. Retailers must go beyond the traditional analysis of SKU/Location sales history patterns to leverage sophisticated data mining capabilities on granular transaction-level data to gain deeper insights into customer behavior patterns and product preferences.

GAINING CUSTOMER INSIGHT WITH DECISION TREE

Historically, retailers have relied significantly on product manufacturers for consumer insights and decision trees based on large geographies and varied methodologies. The Oracle Retail Customer Decision Tree Science and Demand Transference Analytics enables retailers to create customer segment-specific decision trees using available transaction-level data. These customer decision trees are specific to their customer segments and respective geographies. They provide retailers a true understanding of the most important products and product attributes as customers see them. Armed with this detail, the retailer is able to effectively analyze assortment coverage, identify duplication of item types, and prevent the removal of core items that would cause a loss of customers.

IDENTIFICATION OF CUSTOMER PURCHASE AND SWITCHING PATTERNS

Oracle Retail Customer Decision Tree and Demand Transference Science mines customer purchase history to identify shopping and switching patterns. This helps retailers understand what attributes are driving customer purchases, when would they walk away without making a purchase, and when are they willing to switch products? These provide key insights to retailers as they make assortment, pricing, and promotion decisions.

IDENTIFICATION/ELIMINATION OF NATIONAL INFLUENCES AND MANUFACTURER BIASES

By leveraging retailer-specific transaction-level data, a true view of the customer is provided during the customer decision tree creation process. This eliminates any bias that may be present within an externally provided consumer decision tree. Using the Oracle Retail Customer Decision Tree and Demand Transference Science, retailers are able to generate customer decision trees with their data and compare to externally provided consumer decision trees. Based on this unbiased comparison, retailers make adjustments and edits to confirm and approve usage within their assortment processes.

Key Benefits

- *Improve customer satisfaction through the creation of customer-centric and targeted assortments*

- *Understand customer-specific purchase patterns and trade-offs by customer segments and by channels*

- *Leverage Customer Decision Trees built from a retailer's own data to remove any market bias that may exist*

- *Eliminate similar items within an assortment while preventing the removal of key items*

- *Identify the incremental value of each item in an assortment*

- *Recognize the shift in item demand within a particular assortment as items are added or dropped*

ORACLE CLOUD INFRASTRUCTURE

All Oracle Retail Analytics and Planning cloud services are deployed as cloud-native Software-as-a-Service solutions within Oracle Cloud Infrastructure (OCI) upon Oracle's Autonomous Data Warehouse, and are based upon an architecture and technology stack that is optimally engineered for rapid, low-cost deployments and exceptional performance and scalability, and the highest levels of system availability and security - from storage to scorecard.

ORACLE RETAIL AI FOUNDATION

Core retail AI and machine learning (ML) powers all Oracle Retail Analytics and Planning cloud services. For example:

Forecasting Engine - Provide an intelligent starting point for your planners, increasing automation and accuracy. Move to a more touchless and exception management planning process.

Customer Segmentation - Group customers based on attributes, behaviors, and transactions to tailor offers, pricing, and assortments accordingly, incorporating previously hidden patterns in your data.

Advanced Clustering - Cluster your stores based upon traditional approaches of volume, square footage, region, etc., or leverage machine learning techniques to cluster stores based upon similar selling patterns, truly creating a customer-centric assortment.

Profile Science - Determine the best size ratio for your buys by understanding the true demand of your sizes while considering stock-outs.

Attribute Extraction and Binning - Extract item attributes from free-form descriptions, correcting short forms, misspellings, and other inconsistencies, and apply them to Demand Transference, Customer Decision Trees, Advanced Clustering, and more.

Customer Decision Trees - Understand how your customers are shopping your assortments to drive attribute-based alternate hierarchies and effectively plan your assortment the way your customer shops.

Demand Transference - Understand how unique your items are and the incremental revenue that item brings to determine the most optimal assortment for your customer.

Affinity Analysis - Determine how items interact with each other to drive a more effective promotional strategy within your financial planning process.

Innovation Workbench - Leverage open source along with your data science team to create your own AI and ML models. Utilize the language of your choice with Jupyter/Zeppelin notebooks.

ORACLE RETAIL HOME

Oracle Retail Home is a single access point, to simplify a user's interactions with the data and applications that are most relevant to their roles, and to better empower them to anticipate informed actions, and to inspire engagement.

Based on a robust and flexible portal framework, Retail Home is intended first to provide timely and role-specific high-level insights, and second to enable selectively drilling into relevant applications for more details.
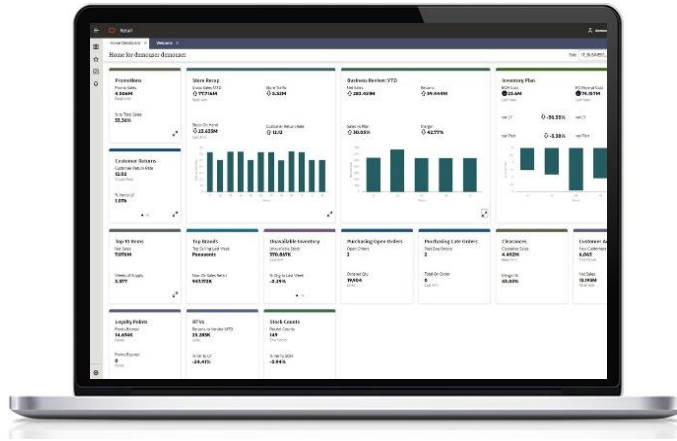
ORACLE ANALYTICS

Oracle Analytics can be used to generate and consume analytics from Oracle Retail AI Foundation data, and in turn can also surface dashboards to Oracle Retail Home.

Oracle Analytics is a comprehensive platform that parlays data into information to provide business insights, federating a broad array of features to suit business users, power users and data scientists:

Governed	**Self-Service**	**Augmented**
• Corporate Dashboards	• Data Preparation	• Natural Language Processing
• Pixel Perfect Report	• Data Visualization	• Voice and Chatbot
• Semantic Models	• Storytelling	• Data Enrichment
• Role-based Access Control	• Sharing and Collaboration	• One-Click "Explain"
• Query Federation	• Mobile Apps	• Adaptive Personalization

Beyond the extensibility afforded by the Oracle Retail AI Foundation's Innovation Workbench, Oracle Analytics, and Oracle Retail Home, also included are Oracle Data Store, Oracle APEX, and Oracle REST Data Services.

ORACLE DATA STORE AND APPLICATION EXPRESS

Oracle Retail Data Store can supply data for Oracle Application Express (APEX) apps and Oracle REST Data Services, which both are included. APEX is a low-code development platform that enables you to build scalable, secure enterprise apps with world-class features that can be deployed anywhere.

Developers can quickly develop and deploy compelling apps that solve real problems and provide immediate value using APEX. You won't need to be an expert in a vast array of technologies to deliver sophisticated solutions. Focus on solving the problem and let APEX take care of the rest.

ORACLE REST DATA SERVICES

Oracle REST Data Services bridges HTTPS and your Oracle Database, providing, among other things, a REST API, SQL Developer Web, a PL/SQL Gateway, SODA for REST, and the ability to publish RESTful Web Services for interacting with the data and stored procedures in your Oracle Database.

ORACLE MACHINE LEARNING

Oracle Machine Learning supports data exploration, preparation, and machine learning modeling at scale using SQL, R, Python, REST, AutoML, and no-code interfaces. It includes more than 30 high-performance in-database algorithms producing models for immediate use in applications.

By keeping data inside the database, organizations can simplify their overall architecture and maintain data synchronization and security. It enables data scientists and other data professionals to build models quickly by simplifying and automating key elements of the machine learning lifecycle.

Learn more or request 1:1 demo