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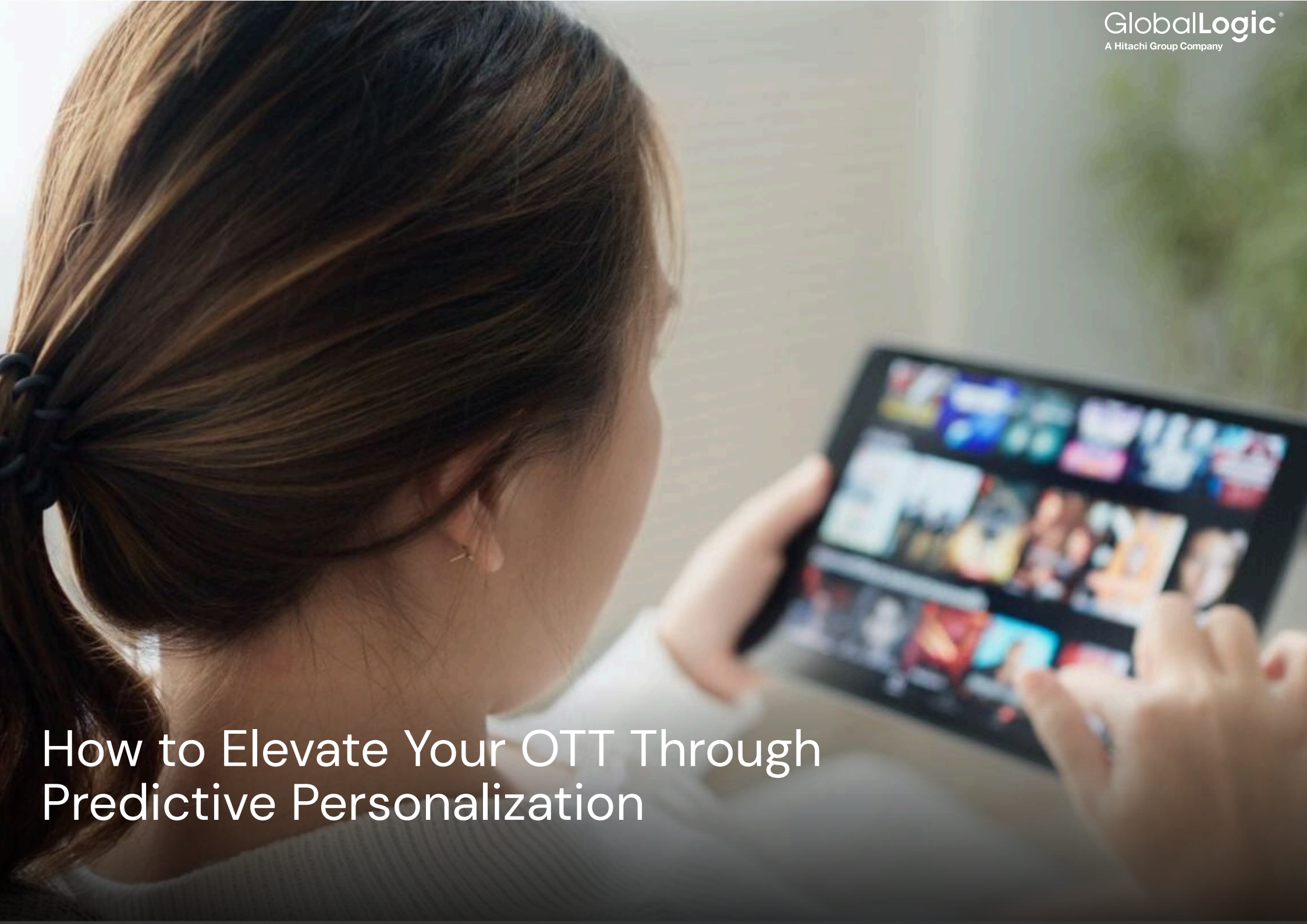


How to Elevate Your OTT Through Predictive Personalization

In the highly competitive market of the OTT industry — where the big players like Netflix, Amazon Prime, and Spotify are leading the race with a wide variety of content and immersive UI/UX experiences — setting oneself apart from other players requires an effort to understand the audience and truly cater to their needs and preferences.

Introduction

Differentiate Your Offering

The success of any OTT platform depends on these key factors: content, discovery, user interface, and user experience. Personalization — the ability to understand the audience and serve them relevant content — targets all these factors.

While the benefits of personalization to viewers – including curated content, ease of content discovery, and greater entertainment value – are obvious, **personalization can also help OTT brands address all kinds of marketing challenges related to:**

- High customer churn
- Targeting the relevant customer
- Content discovery
- Omnichannel viewing
- Showcasing quality, relevant content
- High cost of customer acquisition
- Increasing average user content consumption
- Converting freemium users to paid subscribers
- Competitive marketplace

The 5 “Rs” of Personalization

When developing a personalization solution for OTT, consider first how you want to personalize your platform.

Personalization can be:

- explicit (using direct user inputs), or
- implicit (drawing on inferences created by the data)

You can use viewer profile data to target your customers with personalized content that has specific impact on those viewers’ decisions or behavior.

Alternatively, you can recommend content based on filtering, ranking, and prioritization.

In this case of content recommendation, filtering can be:

- based on popularity,
- semantic (based on viewers’ previous online behavior)
- or collaborative (based on the preferences of segmented audiences).

The goal of any successful OTT service is to achieve the “5 Rs” of personalization:

Recognize

Know your customer and prospect profiles including demographics, geography, and expressed interests.

Remember

Know your customer's history including browsing behavior, actions, communications and brand interactions, and purchases.

Recommend

Reach customers with the right messaging, offers, promotions, and content based on their behavior, preferences, interests, and actions.

Relevance

Deliver personalization within the context of the digital experience based on who they are, where they are located, seasonality, etc.

Reinforce

Measure performance and feed insights back into the recommendation system for ongoing personalization.

Technology

AI/ML: The Future of OTT Personalization

The OTT industry is investing heavily in Artificial Intelligence/ Machine Learning (AI/ML) to grab the 30 crucial seconds of attention from the targeted customer.

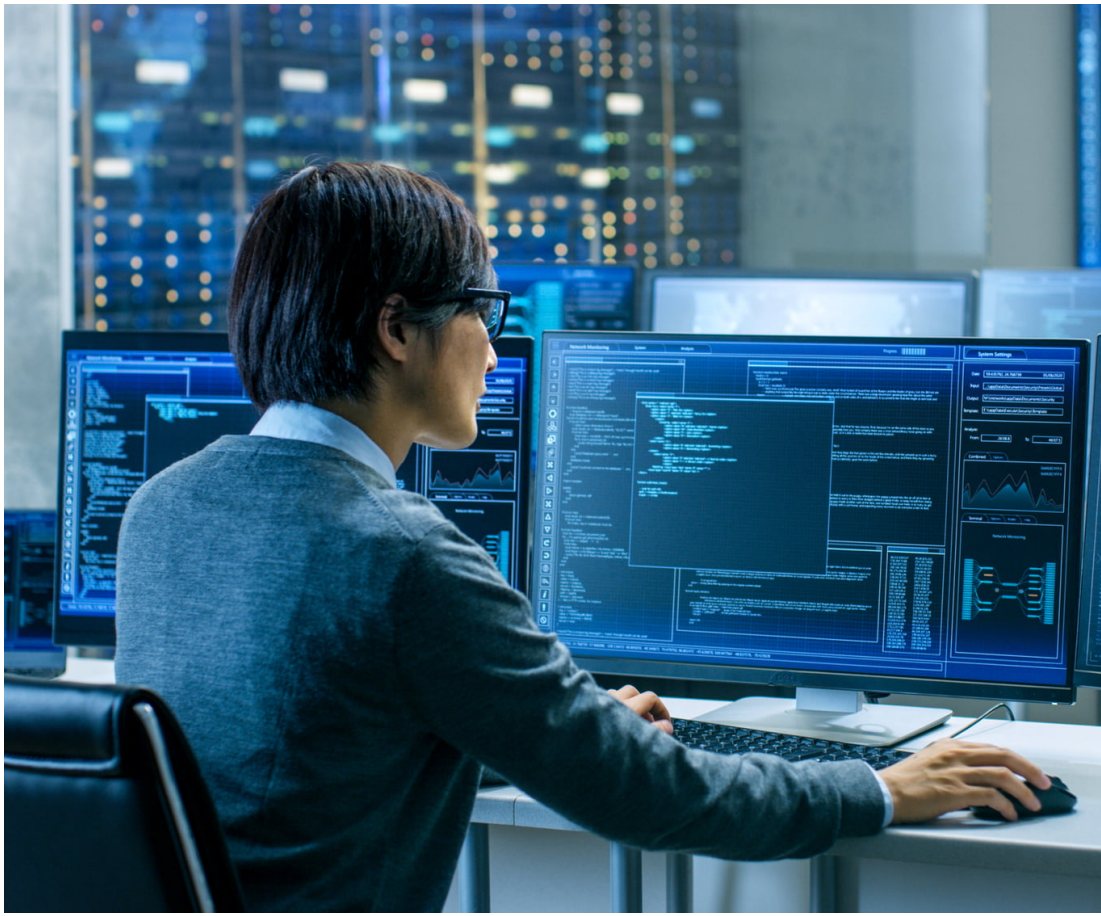
In order to get future-ready, OTT giants like Netflix, Amazon Prime, and Hulu have realized changing consumer interests, viewing habits, viewing patterns, preferences of genre, and so forth are key factors for success.

They are ready to invest in Artificial Intelligence and the data for it.

AI/ML personalization utilizes algorithms and predictive analytics to dynamically present the most relevant content or experience for each and every visitor.

It provides a more scalable way to achieve unique experiences for individuals, rather than segments of people, and utilizes algorithms to deliver one-to-one experiences, typically by way product or content recommendations.

With that said, a next-generation platform can apply AI/ ML personalization to recommended categories, brands, offers, and a lot more.

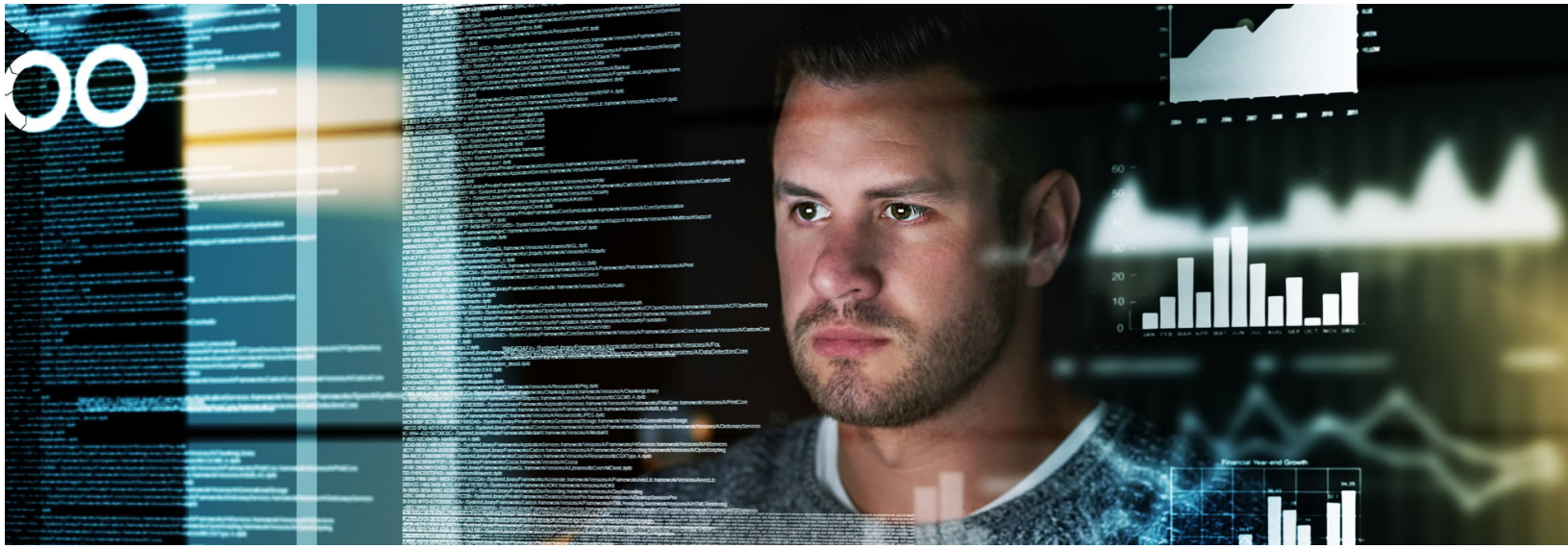


Example Use Cases

In simple terms, AI/ML personalization can be defined as delivering the right content to the right user, at the right time, and across all touch points. Here are some examples of how AI/ML personalization can be used in the OTT market.

Personalized Marketing Campaign: Personalized offers and messages tailored to behavioral insights and personal data gained from real time user interaction for contextual campaigns.

Customer Sentiment Analysis: Not only helps discover positive and negative inferences from customer behavior but also provides more concrete information for better personalized recommendations.



Personalized Recommendations: Analyzes disparate data and enables the consumer to make personalized content choices while the business predicts behavior.

Customer Segmentation: Transforms customer data into actionable user segments and generates targeted personalized plans and subscribers.

Personalized Email and SMS: Drives more results through personalized email and SMS.

Media Metadata Tagging: Automates the creation of a rich metadata index (object, scene, activity, faces, etc.) extracted from audiovisual content and integrated into digital and media asset management systems.

Automated Compliance Marking: Detects potentially inappropriate content to avoid compliance issues in global markets and to increase brand safety for advertisers.

Recommended Reading: AI is the Future of Media [Blog]

Example User Journey: Here's a sample workflow to demonstrate how OTT businesses can use ML and predictive analytics to apply personalization.

Data & Types		
Content: device, location & time	**Interaction:** rating, reviews, and social media	• Content plays a key role in personalization by uncovering customers' interests
Usage: frequency & duration	**Metadata:** content, usage & program attributes	• Big data technology like Spark and Splunk can easily ingest data into system
Behavior: viewing & non-viewing	**External Interaction:** social and third-party interactions	• Data can be of different formats and from different sources • Can use a real-time or bulk schedule process
Analysis & Insight		
Preferences: notification, privacy & settings	**Audience Segments:** motivation, lifestyle & demographics	• Understanding/knowing customer segments and targeting customers with tailored offers and promotions
Viewing Habits: typical & unusual	**Session Segments:** purpose, duration, type & content	• Predicting the right mode of communication for customers for new promotions/offers, which will maximize the responsiveness of customers
Behavior: viewing and non-viewing	**Customer Affinities:** trending content & interests	• Determining the right subscription model/ pricing model for packages/plans offered to customers as per their preferences, lifestyle, and viewing habits

Target	
Email/SMS: recommended post, product & timing	Recommendation: curated content recommendation
Advertisements: targeted and customized	Search: query suggestion, results ranking, and filtering
App: dynamic content, sales offer, and new feature	Social/Blog: related post, content curation & sales offer

- Targeting customers to provide customized recommendations and advertisements at all touch points
- Touchpoints can be email, SMS, advertisements, and apps across a variety of devices

Discover the technologies & key trends impacting Over-The-Top (OTT) media brands today – and how to prepare for the future.

Get the Ebook

Implementation

Methods for Prediction and Personalization

Discover different techniques in AI/ML that can help with personalization.

Matrix Factorization (MF) & Markov Chains

Conventional recommender systems often discard sequential information and focus on mining the static relevancy between users and items from interactions.

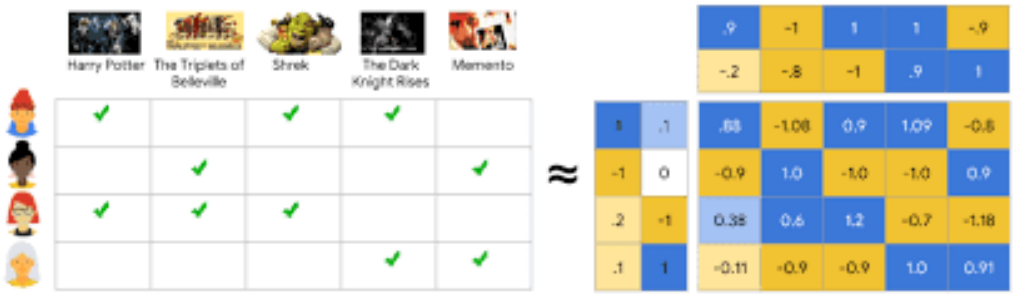
For instance, a conventional recommender system based on matrix factorization may be effective at modeling a user's general preferences by learning from their entire interaction history, but it does not model the order of the user's interactions.

One of the most popular approaches uses both matrix factorization (MF) and Markov chains (MC).

Matrix factorization methods learn the general taste of a user by factoring the matrix over observed useritem preferences.

On the other hand, Markov chains methods model sequential behavior by learning a transition graph over items that is used to predict the next action based on the recent actions of a user.

Popular modeling choices for session-based recommender systems include Markov chains with matrix factorization to achieve good recommendation performance.



Matrix factorization

Unlike conventional recommender systems, session-based recommender systems model the evolution of a user's short-term preference implied by sequential interactions in a session with the aim of recommending the next item a user may be interested in.

Clustering Algorithms

Clustering algorithms are unsupervised ML algorithms used to analyze unlabeled data, segregate it into groups with similar traits, and assign into clusters.

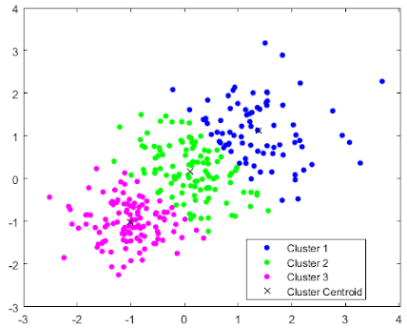
Among the most popular is the k-means algorithm.

It starts with estimating the centroids for clusters, the number (k) of which you define in advance. The second step assigns data sets to the nearest centroid based on the Euclidean distance.

After that, the centroids for all clusters are recomputed.

This ML method enables:

- audio and video classification based on tags, topics, etc.,
- customer segmentation based on purchasing/watch history, app behavior, etc.
- recommendation engine development,
- social media analysis,
- anomaly detection,
- and more.



Regression Analysis

Regression analysis is a supervised ML algorithm for defining relationships between independent (predictor) variables and the dependent (target) variable.

Regression (linear) aims at finding a straight line which can accurately depict the actual relationship between two or more variables.

The most popular regression techniques are linear and logistic modelling techniques. It can be used for:

Predictive Analytics: Forecasting future opportunities and risks in OTT business. Demand analysis, for instance, predicts the number of items a consumer will probably purchase and watch, etc. Forecasting helps improve productivity, reduce cost, and improve operation.

New Insights: Finding a relationship between different variables by uncovering previously unnoticed patterns. For example, analysis of data from point of sales systems and purchase accounts may highlight market patterns including increased demand on certain days of the week or times of year.

Optimizing Marketing Campaigns: With the help of determining customer behavior, predictive modeling creates and retains profitable users from the marketplace.

Association Rule Mining: Finding interesting associations and relationships among large sets of data items. This rule shows how frequently an item set (movie) occurs in a transaction. A typical example is Market Based Analysis.

OTT providers like Amazon and Netflix mine millions of users' data to see which movies or series are watched together. This mining reveals patterns of associations or rules called knowledge, and the provider builds upon it every day. The provider is thus able to make accurate predictions and recommendations to its users.

Conclusion

Improve Conversion, Engagement, Retention

While the opportunity that OTT represents is extraordinary, it is also an increasingly crowded marketplace with market leaders providing viewers endless options.

Churn rates for OTT are very high, so ensuring viewers can find content quickly is of paramount importance – or they'll disengage and seek other options.

Predictive personalization makes this possible, and that results in better conversion, engagement, and retention.

Using machine learning algorithms for personalization helps stakeholders to forecast future trends as well as empowers them to make data driven decisions.

Conclusion

GlobalLogic partners with OTT players to deliver industry-leading expertise in a variety of tools, software languages, cloud environments, and infrastructure to seamlessly integrate and collaborate with our clients' in-house engineering capabilities. Our global team of experts have deep experience in the build, design, implementation, and testing of systems per agreed-upon product definitions and specifications.

About GlobalLogic

With 20+ years of experience in software product development and engineering services, GlobalLogic helps some of the world's leading global brands in video & audio streaming, broadcasting, studios, media tech, and ad tech create world-class media experiences and accelerate new product development while evolving revenue streams.

With more than 2,000 media-specialized engineers, GlobalLogic has partnered with more than 50+ media clients executing 250+ projects, built 200+ OTT applications from scratch, and certified 10,000+ applications while managing the OTT stack through the product life cycle. GlobalLogic is your one-stop shop for media and OTT needs.

Let's Work Together

Get in touch

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Thank you for reading

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