Gaming Companies Use Data Analytics to Score Points with Players

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Video gamers are a special breed. Sure, they spend a lot of time playing games, but they're also building social networks. Like sports athletes, video game players thrive on competition. They play against other gamers online. Those who earn first place, or even second or third place, have bragging rights. And like athletes who invest a lot of time training, video gamers take pride in the number of hours they spend playing. Furthermore, as games increase in complexity, gamers take pride in developing unique skills to best their compatriots.

Video game companies can tap into this environment and learn valuable information about their customers, especially their behaviors and the underlying motivations. This customer data enables companies to improve the gaming experience and better engage players.

A New Level of Gaming

Video gaming has evolved from the days of PAC-MAN and arcades. The widespread availability of the Internet has fueled the popularity of video games by bringing them into people's homes via a wide range of electronics such as the personal computer and mobile devices. The world of computer games is now a powerful and profitable business.

According to NewZoo's *Global Games Market Report* from April 2017, the global games market in 2017 saw:

- $109 billion in revenues.
- 7.8 percent increase from the previous year.
- 2.2 billion gamers globally.
- 42 percent of the market being mobile.

Traditionally, the gaming industry appealed to its customers—the gamers—by offering striking graphics and captivating visualizations. As technology advanced, the graphics became more vivid with hi-def renditions. Companies have continued to use technology in highly creative ways to develop games that attract customers and capture their interests, which results in more time spent playing and higher affinity levels. What video game companies haven't done as well is to fully utilize technology to understand the contextual factors that drive sustained brand engagement.

Know the Players

In today's gaming world, creating an exciting product is no longer enough. Games must strongly appeal to the visual and auditory senses in an era when people expect cool graphics and cutting-edge sound effects. Games must also be properly marketed to reach highly targeted player groups. There are also opportunities to monetize gaming characters in the form of commercially available merchandise (e.g., toy store characters) or movie rights. Making a game successful requires programmers, designers, scenarists, musicians, and marketers to work together and share information. That's where gamer and gaming data comes into play.

For example, the size of a gamer's network—the number and types of people a gamer plays with or against—usually correlates with more time spent playing and more money that is spent. The more relationships gamers have, the higher the likelihood they'll play more games with more people because they enjoy the experience. Network effects amplify engagement volumes.

This data also helps companies better understand the types of games each individual likes to play. These insights enable the company to recommend additional games across other genres that will likely exert a positive impact on player engagement and satisfaction.

Companies can also use this data in marketing campaigns to target new gamers or entice existing gamers to upgrade their memberships, for example, to premium levels.

Monetize Player Behaviors

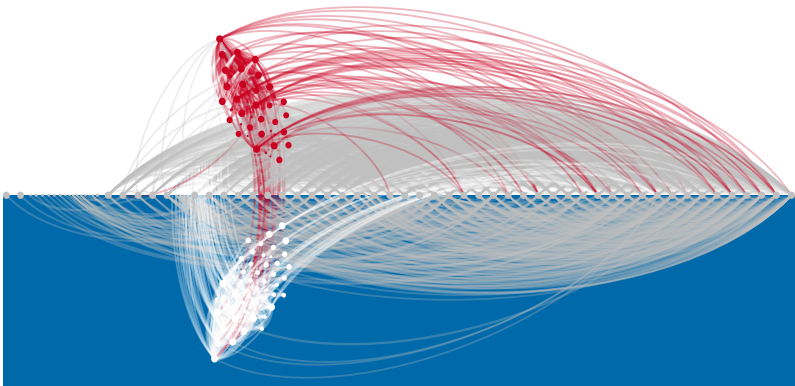
Collaborative Filtering (cFilter) is an advanced analytic function that makes automatic predictions (filtering) about the interests of a user by collecting preferences or taste information from many users (collaborating).

The cFilter function supposes that if User A has the same opinion as User B on one issue, then User A is more likely to have User B's opinion on a different issue when compared to a random user. This shows that predictions are specific to a gamer based on data from many other gamers.

Filtering systems are often used by online retailers to make product recommendations. The analytics can determine products that a customer will like based on what other shoppers who made similar purchases also bought, liked, or rated highly. There are many examples across other industries such as healthcare, finance, manufacturing, and telecommunication.

The cFilter analytic function offers several benefits to online video game companies:

- **Marketers can run more effective campaigns.** Connections between gamers naturally form to create clusters. Marketers can isolate common player characteristics and leverage those insights for campaigns. Conversely, they can isolate players who do not belong to a cluster and determine what unique characteristics contribute to their non-conforming behaviors.
- **Companies can improve player retention.** A strong membership in a community of gamers decreases the chances of churn. The greater the incentives for gamers to belong to a group of active participants, the more desire they have to engage in competitions. This increases the "stickiness" of customers and can lead to more game subscriptions.
- **Data insights lead to improved customer satisfaction.** Clusters indicate a desire for certain types of games that correspond to distinct gamer interests and behaviors. Companies can create gaming experiences that are unique to each player. Enticing more people to play, and play longer, enhances gamer satisfaction.



See Gaming Networks in 'The Sword'

Teradata Art of Analytics data scientists use Teradata® Aster® Analytics to turn data into insights and visualizations. Native advanced analytic functions such as Collaborative Filtering (cFilter) and the Teradata AppCenter framework were used to visualize video gamers' interactions with other players in their networks.

Detailed online gaming data that included game participant information, sessions played, time spent playing, player partners, and challenge levels was analyzed. The analysis determined affiliations between gamers and the strength of those connections over time. The result is an artwork called "The Sword."

At least two networks—one in red and the other in white—can be seen in The Sword. Each brightly colored dot represents a gaming participant, who is clustered around like-minded gamers. The closer the dots, the more intertwined the players. A few gamers cross both distinct clusters, revealing that some players compete against participants of multiple networks. These gamers could be influencers who increase membership with their contacts.

The Sword also shows network members who could be instrumental in influencing non-network gamers to join their particular network. Over time, visualizations can show how an individual player moves from being independent to being an active member of a group and perhaps even attaining influencer status at some point.

Once companies understand why customers want to play games and uncover their relationships with other gamers, they can create the right incentives for players to keep returning. This ensures a sustained customer base and stable revenue streams.

Boost Loyalty and Revenue

Regardless of the genre, each video game has passionate players who seek each other out for competitions. The thrill of a conquest attracts avid engagement. Over time, distinct networks of gamers are formed, with each participant constructing social relationships that often lead to more frequent and intense gaming interactions.

The gaming industry is now utilizing data, analytics, and visualizations to discern customer behaviors better and uncover player motivations. Looking at customer segments is no longer enough. Companies are now looking at micro-segments that go beyond traditional demographics like age or geographic location to understand customer preferences such as favorite games, preferred levels of difficulty, or game genres.

By gaining analytic insights into gamer strategies and behaviors, companies can create unique gaming experiences that are attuned to these behaviors. By engaging players with the games and features they desire, video game companies gain a devoted following, grow profits, and develop new revenue streams through merchandising ventures.

Go Beyond the Game

Sri Raghavan, data scientist and senior global product marketing manager for Teradata, explains how data from multiple sources can help video game companies understand their customers.

Watch the video to see how the companies can use analytics to decipher gamer relationships that drive user behaviors and lead to better games.

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