

Audience Discovery Overview

Audience Discovery is an algorithm for automatically classifying a client's customers into audiences. This grouping occurs according to the categories of the products that those customers view during their respective [Monetate session](#). The algorithm defines one or more audiences for each calendar month.

For a clothing retailer, for example, Audience Discovery might find a set of customers interested in women's jeans, women's dresses, boys clothing, and girls clothing, and that audience might represent "Moms." For a ticket resale site, it might find an audience of customers interested in *Some Like It Hot*, *Hamilton*, and *The Lion King*—a musical theater audience. The Audience Discovery page in the Monetate platform then presents those audiences alongside Web behavior metrics as well as demographic and technographic data.

The goal is to solve some of the "cold-start problem," when marketers don't always know what to do to better personalize. Audience Discovery provides marketers with a data-driven understanding of who their customers are. From speaking to clients, Monetate has found that the algorithm is great for revealing data in these circumstances, among others:

- The client knows the audience exists but doesn't know how to target that audience on-site
- The client knows the audience exists but doesn't know how that audience behaves on-site
- The client doesn't know an audience exists and is surprised to find out about it

While [Audience Explorer](#) is used to create new audiences based on conditions and criteria, Audience Discovery creates audiences for you based on machine learning.

Data Collected

Audience Discovery uses only on the first-party, account-specific data that's already being sent to Monetate.

The machine-learning algorithm powering Audience Discovery *does not* leverage data across accounts or retailers. It doesn't leverage data from anywhere but the site on which the [Monetate tag](#) is installed.

Because it's based on the product types viewed in each Monetate session on your site, Audience Discovery uses the values in the `product_type` attribute in the site's default product catalog to associate one or more product types with each product view recorded. It then groups sessions by similarities in their product type preferences to categorize customers. The technographic, demographic, and Web behavior statistics already being provided to Monetate then allows Audience Discovery to layer in additional analytics and context. As a result, it uses no more data than what's already typically sent to and served by the platform.

Interpreting Product Types

Audience Discovery considers the hierarchy splits of each product type when deciding whether sessions have product types in common. For example, if customer A views product type Men's > Jackets > Winterwear in one session and customer B views product type Men's > Bottoms > Jeans in a session, then both customer sessions are associated with the top-level Men's category.

The Audience Discovery algorithm recognizes as similar those sessions that have views of different product types that have the same top-level hierarchy.

To help ensure Audience Discovery accurately classifies customers into audiences, define a hierarchy of product types in the default product catalog. Otherwise, it only considers exact matches on the whole product type string when determining which sessions are similar, which may leave out potential similarities.

Consider this example of what happens when the default product catalog lacks a defined hierarchy of product types. Customer A views product type Men's Jackets Winterwear in a session, and customer B views product type Men's Bottoms Jeans in a session. As a result, Audience Discovery may not recognize the sessions as similar because the two whole product type strings aren't exact matches.

Product Type Hierarchy Best Practices

Keep in mind this guidance if you aim to define a hierarchy of product types to improve Audience Discovery's performance.

- Think about what product categories you want to see in relation to one other in Audience Discovery segments, and then use those categories as product types.
- Avoid having too many distinct product types because the Audience Discovery model treats all the product types as unique identifiers.
- Including too many values in the `product_type` attribute might not return the best results. Monetate recommends putting those values into other attributes in the catalog.

A more concrete example of how granular a product type hierarchy could be is the clothing retailer example from the second paragraph: women's jeans, women's dresses, boys clothing, girls clothing.

Furthermore, to ensure each product type value is parsed correctly, follow the guidance for the `product_type` attribute in the Monetate [product catalog dataset specification](#).