

# 643 Discussion 1

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## Problem Statement

*Choose one commercial recommender and describe how you think it works (content-based, collaborative filtering, etc). Does the technique deliver a good experience or are the recommendations off-target?*

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## TasteDive: A Web-Based Recommender System for Music, Movies, and More

**TasteDive** provides recommendations “..to help users discover new music, movies, TV shows, books, authors and games..” based on their own personal preferences. The site can be accessed via the following web link:

<https://tastedit.com/>

## How it Works

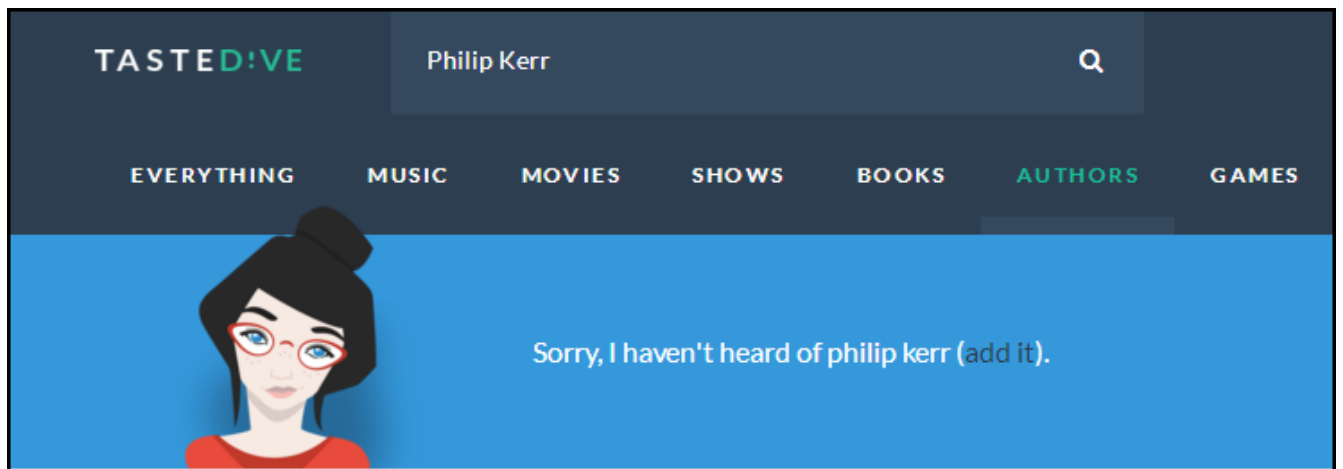
The **TasteDive** recommender system appears to be maintained on a part-time basis by a small group of recommender system enthusiasts based in Amsterdam and London. As stated on their “About” page, the system was built using elements of Python, Flask, Celery, Redis, MySQL and Amazon Web Services.

The recommender appears to function on the basis of a combination of content based filtering and collaborative filtering. For content based filtering, the system appears to leverage information scraped from Wikipedia: In fact, all items contained within the recommender are linked to their respective Wikipedia pages, as will be seen in the graphics shown below. If this is in fact the case, the recommender may be making use of not only the textual descriptions provided for Wikipedia items but also the “Categories” that permeate the lower portions of Wikipedia pages as the basis of its content-based capabilities.

From a collaborative filtering standpoint, the recommender appears to make use of user-supplied item ratings. As will be seen below, users can apply three possible ratings to items contained within the system. Users with **TasteDive** accounts receive personalized recommendations based on items they’ve rated as well as a “taste profile” that they define for themselves. Users without accounts appear to receive collaborative-filter based recommendations in the sense that they are recommended items that were “Liked” by users who also “Liked” the search item.

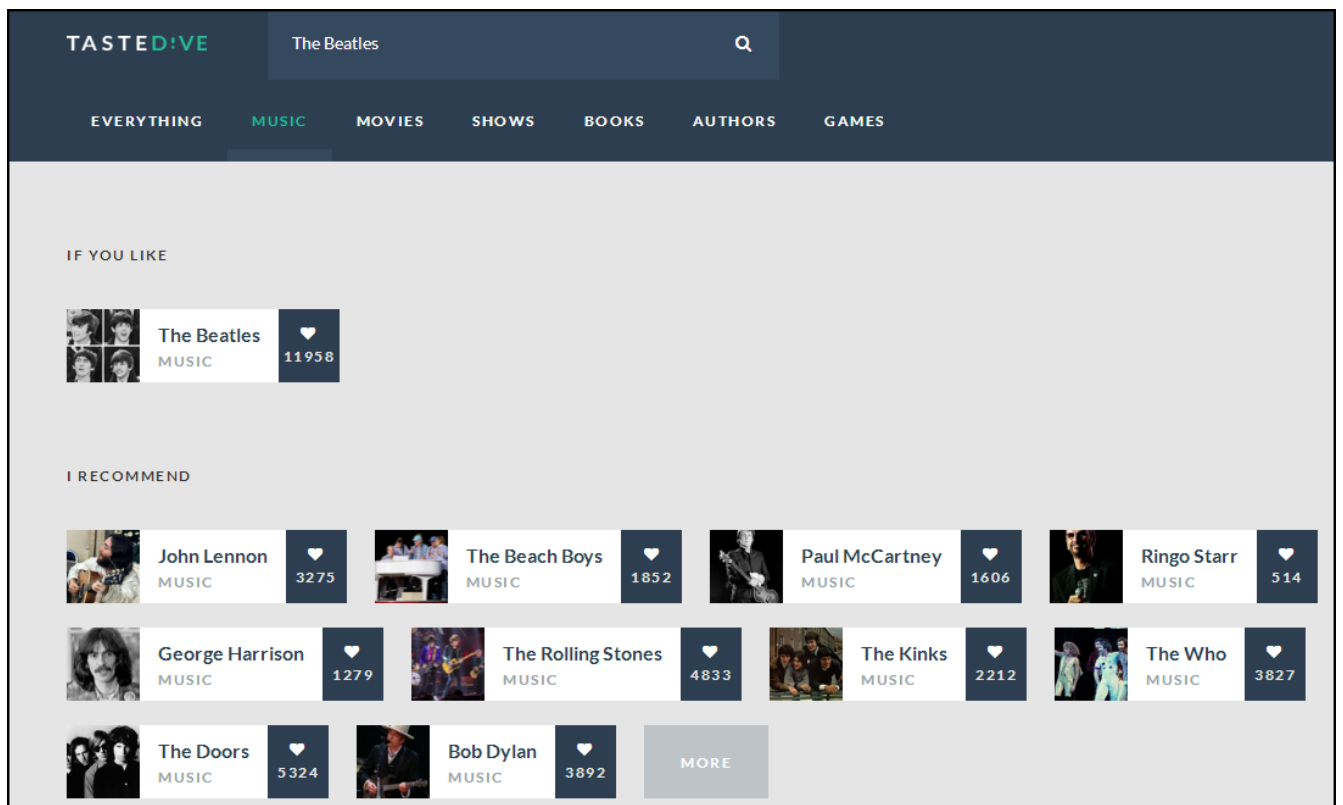
## User Experience

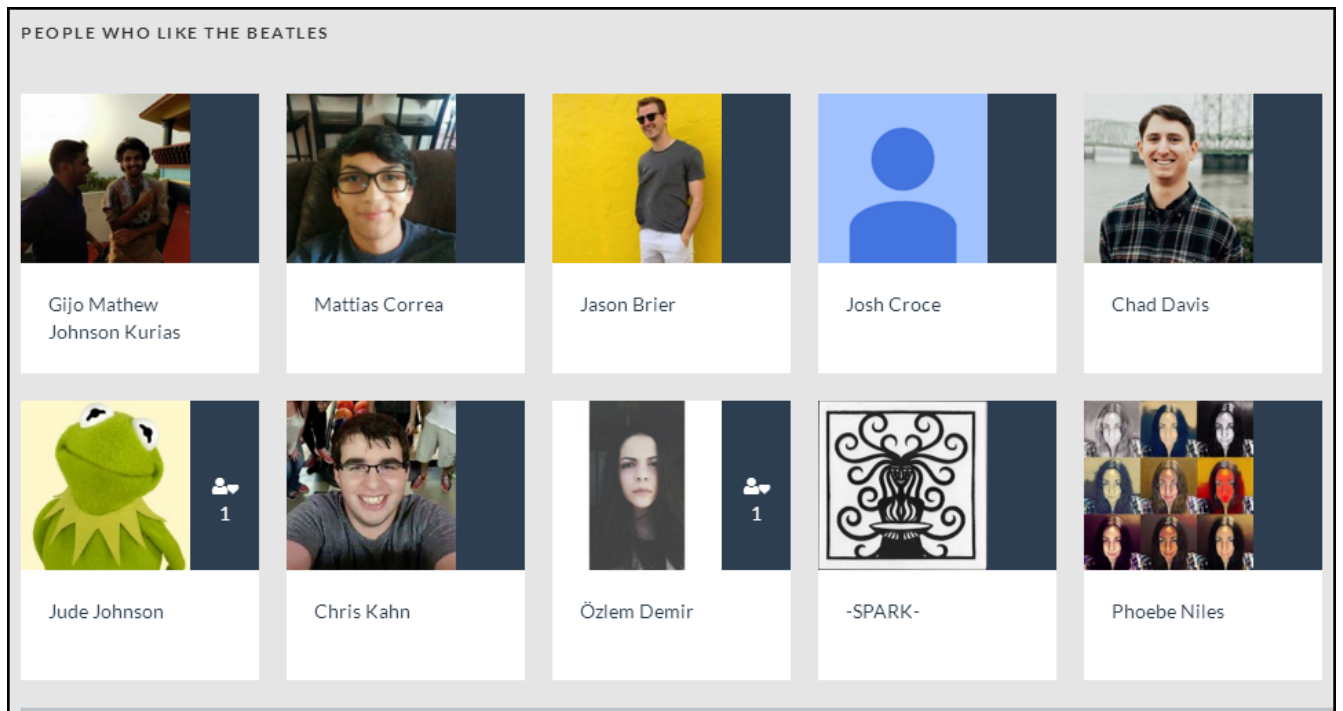
**TasteDive** offers both anonymous public user access and account-based access. Public user access allows a user to enter the name of a musician/band, book, movie, TV show, author, or game. If **TasteDive** contains no information on the topic entered, the user receives a response similar to the following:



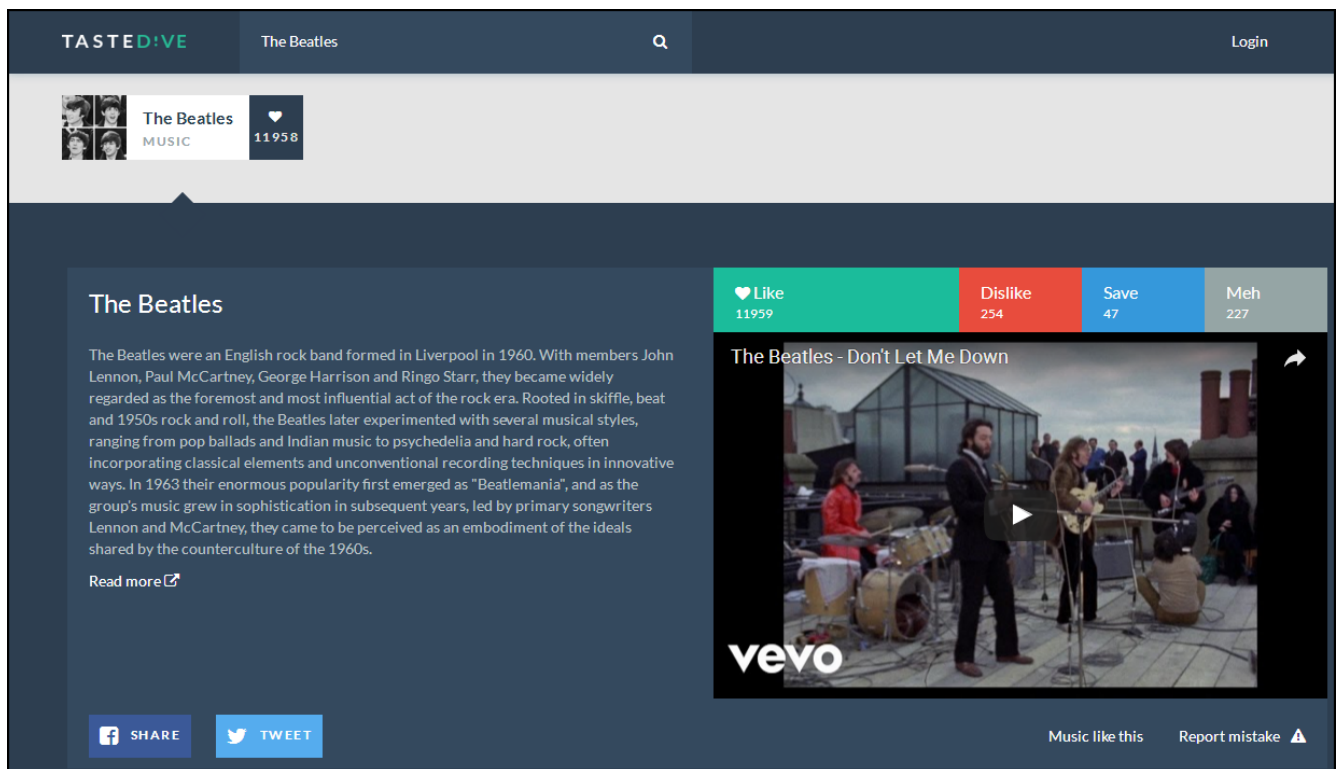
As we can see above, a search for the historical fiction author Philip Kerr indicates **TasteDive** is unaware of that author, despite his having written more than 30 books, several of which have been best sellers. However, as we can also see in the graphic shown above, **TasteDive** provides a user with an active account the option of adding an “unknown” item to the recommender engine.

Conversely, if the search item is “known” to **TasteDive**, the user is provided with a response indicating the number of “likes” the search item has received along with a list of recommended “similar” items as well a list of **TasteDrive** users who “Like” the search item. An example of this is shown below for a search on “The Beatles”:





Clicking on the search item's icon produces a screen containing additional information on the item, including text sourced from Wikipedia. The users with accounts are also given the option of rating the search item by "Like", "Dislike", or "Meh".



## Performance

Overall, I found the recommender to perform fairly well for items that were both known to it and rated a sufficient number of times. For example, searching on “Adele” produces solid recommendations for musical artists such as Amy Whinehouse and Christina Aguilera. Similarly, searching on “Frank Zappa” produced recommendations for other avant-garde musical artists such the Mahavishnu Orchestra, Robert Fripp, Soft Machine, and Captain Beefheart. Searching on “Stephen King” produced recommendations for horror/thriller authors such as Dean Koontz, Anne Rice, Michael Crichton, and Clive Barker.

However, the recommender does have some significant shortcomings:

- The “Music” search doesn’t seem to function if a user searches on either album or song titles. As such, users are limited to searching on the names of musical artists. For example, a search on “Abbey Road” yields “Sorry, I haven’t heard of Abbey Road”.
- “Music” appears to be the most heavily used category on the site. While many items in that category have thousands of “Likes”, most items from other categories have fewer than 100 “Likes”.
- Since the system appears to be heavily dependent on users for the addition of new content, the breadth of possible valid items (and therefore recommendations) is somewhat limited.

Therefore, prospective users should be cognizant of the limitations of the **TasteDive** recommender system. While ambitious in its attempt at combining collaborative and content-based filtering, the lack of content for what many would consider to be “non-long tail” items might limit **TasteDrive’s** appeal to a broader audience.