UNBXD

Selecting the right commerce search solution

Does your solution have the four key analytical components needed to power a highly relevant commerce search experience?

“Shoppers using search are 2-3X more likely to convert than other shoppers”.

- Forrester Research

Most online retailers know how important it is to improve the relevancy of their search experience.

But a challenge they often face is - How to identify and choose the commerce search solution that provides their shoppers with the most relevant results, every time?

Our aim in this ebook is to explore the 4 key analytical components that power a highly effective commerce search experience, to make it easier to evaluate and choose a solution that maximizes improvement in relevancy.

Presence of these components in a search solution assures maximum lift in relevancy.

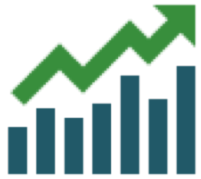
The 4 analytical pillars of a relevant search solution

Query Preprocessing

Preparing the shopper's query for advanced analytics

Query Intent Identification

Using advanced algorithms to determine the shopper's intent



Shopping Trend Insights

Using local and global shopping trends to increase relevancy

Personalized Ranking

Ranking search results based on individual shopper preferences

1

Query Preprocessing

Preparing the shopper's query for advanced analytics

The search algorithm runs some basic sanity checks, cleansing, and standardization processes on the shopper's query to make it suitable for advanced analysis.

Query Preprocessing

Query Preprocessing should use the following checks to prepare the query for advanced analytics

SYNONYMS AUTO TAGGING

Ensures the most relevant results are returned by automatically searching for synonyms of keywords within the query.

Example: In the highlighted query, “Rouge” and “Red” are synonyms. So, Italian Leather Sofas that have been tagged Rouge instead of Red will also be included in the results.

STEMMING

Enables the search engine to understand that all words with the same root should be treated equally,

Example: In the highlighted query, “shaped” and “shape” will be treated as the same when the query is processed..

STOP WORDS

Eliminates any unnecessary filler words from the original query to ignore false matches.

Example: In the highlighted query, “the” is removed because its value as a keyword is extremely minimal.

2

Query Intent Identification

Using advanced algorithms to determine the shopper's intent

The search solution runs the query through its suite of advanced algorithms to accurately determine the intent of shopper.

Query Intent Identification

Query intent identification should use the following algorithms to accurately identify shopper intent

SPECIFICATION HANDLING

Identifies product specifications in the search query.

Example: For the query “iPhone 6s charger,” Unbxd understands ‘6s’ as a specification of the product ‘iPhone,’ and that the product the user wants to buy is a ‘charger.’ So, instead of displaying all mobile phone chargers, higher priority is given to chargers belonging to the iPhone 6s..

DIMENSION HANDLING

Identifies product dimensions in the search query.

Example: Although each of these queries - “42’ TV”, “42 in TV” and “42 inch TV” are worded differently, Unbxd understands them as the same dimensions of the product type TV.

FEATURE EXTRACTION

Categorizes the query into appropriate attributes for accurate search.

Example: In “Red Italian Leather L-Shaped Sofa”, the solution identifies each keyword according to its corresponding attribute: Red→Color, Italian Leather→Material, L-Shaped→Sectional Sofa→Product Type..

SPELLCHECK

Automatically recognizes and corrects misspelled words.

Example: If a shopper searches for “Bleck Lethar”, Unbxd would identify both misspelled words and replace them with their corrections - “Black Leather.”

Query Intent Identification

Query intent identification should use the following algorithms to accurately identify shopper intent

RELATIONAL QUERIES

Determine user intent through the understanding of grammatical constructs.

Example: For theme based searches like “Dresses for Parties”, the solution assesses that “Dress” is the primary product type and that “Parties” is related to “Dress” and is a secondary attribute.

DIVERSITY HANDLING

Resolves the lack of identifiable shopper intent from head queries by showing a diverse result set.

Example: If a shopper searches for a broad keyword like ‘phone,’ the solution shows a variety of phones across different brands, models, colors, and more in search results.

HANDLING LOW-INTENT LONG-TAIL QUERIES

Maps long tail queries to the relevant popular queries to ensure better recall.

Example: “Red Italian Leather L-Shaped Sofa” query can be mapped to “Italian Leather Sofa” or “Leather Sofa”. These more popular queries will ensure search results, instead of showing a zero results page.

Query Intent Identification

Query intent identification should use the following algorithms to accurately identify shopper intent

AUTOMATED THESAURUS

Leverages machine learning to automatically identify similar words in a document based on occurrence patterns, frequency, etc. These words can then be appended to the query to increase recall.

Example: In the query "The red Italian leather l-shaped sofa," the algorithm identifies "couch" as a similar word to "sofa," and automatically includes "couch" when retrieving results.

QUERY LOG ANALYSIS

Analyzes the query logs to identify browsing patterns of shoppers with similar preferences. These insights can be used to further increase relevancy.

Example: If a shopper inputs "red sofa," query logs can reveal that most shoppers searching for red sofa preferred "Italian leather," material. The solution can use this information to modify the search results.

EXTERNAL DATA SOURCES CRAWLER

Boosts search performance by crawling external web-based lexical corpuses to structure the data and identify semantic relevance.

Example: Several web-based data sources like Wikipedia, ConceptNet and WordNet contain vast amounts of lexical information that can be utilized to deepen understanding of and fetch related terms for specific queries.

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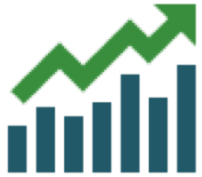

Shopping Trends Insights

Using local and global shopping trends to increase relevancy

The search solution modifies search results based on learnings from global and local trends.

Shopping Trends Insights

The solution should use insights from the following trends

SEASONALITY

Takes into account events (like Thanksgiving, Christmas, Valentine's Day, etc.) where overall web traffic and demand for certain products substantially increases.

Example: During Valentine's Day, shoppers tend to prefer purchasing red items, and demand for gift cards surges around Christmas. You can increase conversions by boosting these high demand products during these periods..

RECENT TRENDS

Watches for certain topics that suddenly start trending, for example on social media, resulting in a significant surge in demand.

Example: If a certain athlete or sports team starts performing really well, shoppers are more likely to buy their associated jerseys and products. To increase the chance of conversion, the search engine surfaces these items higher in search results..

UNEXPECTED EVENTS

Follows and adapts to certain unpredictable events that can lead to a sudden change in user behavior..

Example: If a certain region forecasts that a hurricane or blizzard will strike in the near future, there's likely to be an increase in demand for items such as groceries and flashlights.

4

Personalized Ranking

Ranking search results based on individual shopper preferences

The search solution personalizes the ranking of search results based on individual shopper preferences.

Personalized Ranking

The solution should personalize search result ranking by any of the following techniques

PERSONALIZATION

Ensures that shoppers see products based on their individual preferences.

Example: If two shoppers search for “Polo Shirts” and one has an affinity for the brand “Ralph Lauren” and the other for “Tommy Hilfiger”, then they should see different search results where their respective brands are given higher preference.

SEGMENTATION & TARGETING

Builds shopper segments based on device, geography, marketing channel/ campaign and user-type (new/repeat) to enable targeting with custom-made campaigns.

Example: Online retailers can target users based on their locations and show them products accordingly. This is useful if certain brands perform better in different locations. A great commerce search engine should enable customers to create segments accordingly..

Today's online shoppers are spoilt for options. Their regular exposure to extremely relevant search experiences on sites like Google.com and Amazon.com has reduced their tolerance for non-relevant experiences.

A solution that contains all the 4 key components can significantly improve the shopper search experience, leading to 30% - 40% increase in search conversion rate.

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For more information on enhancing your commerce search relevancy, contact us at sales@unbxd.com

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