Signals for text retrieval and recommendations experience on Ecommerce applications

Problem: In current world of ecommerce industry one of the biggest problems we all are facing is to provide a relevant search results and recommendations. There are multiple ways to improve relevancy, we can use many methods to improve relevancy based on content or categories of products but understanding the actual user's need is tough to understand. It is very important to get a feedback from user and provide the test result-based on user's feedback.

Below description is captured from Lucidworks website.

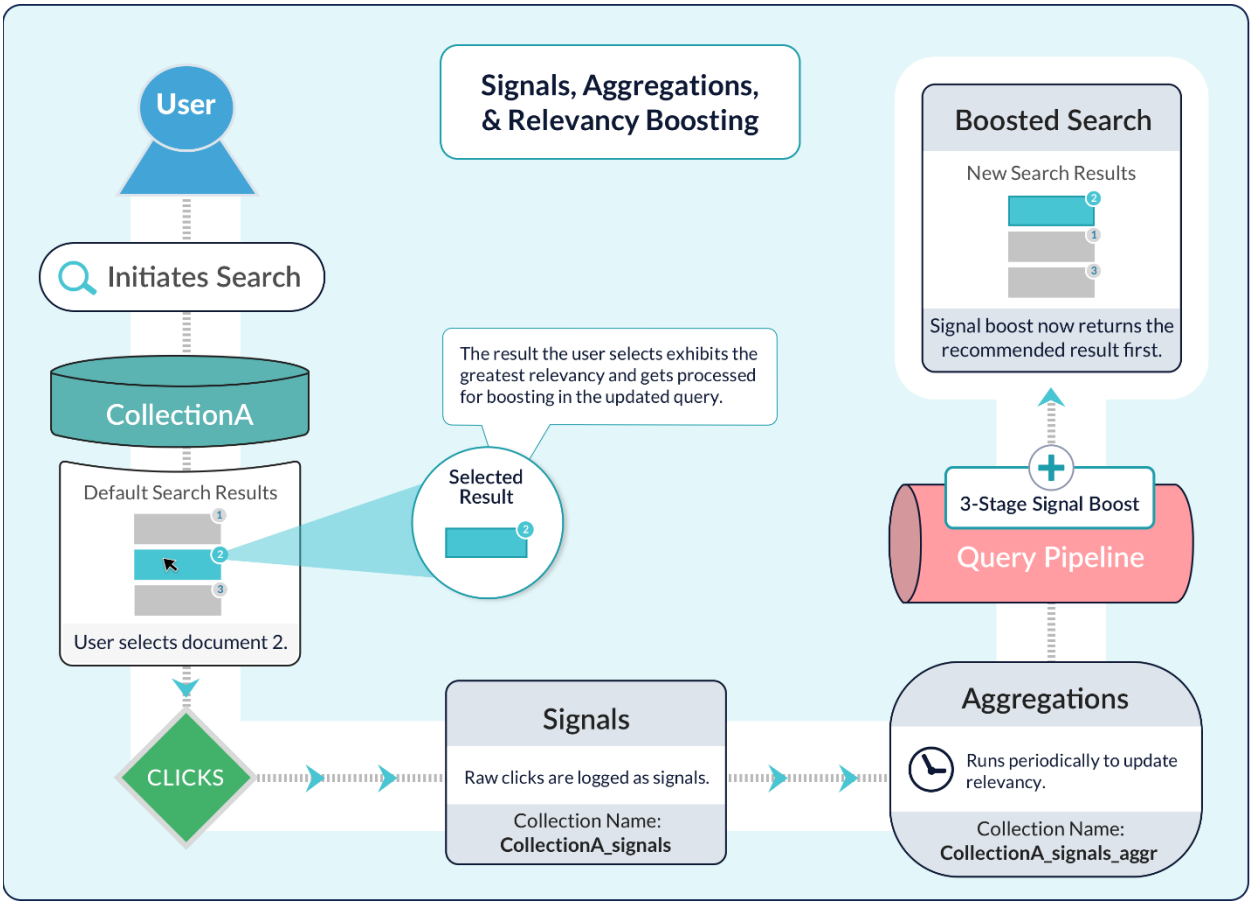
What are signals?

They are the things people click on. The things that they don't. The things they put in their carts, and the things they leave behind. The things they eventually download. Even the items they hover over.

Signals and Aggregations:

In addition to the basic search experience enabled through query pipelines, Fusion provides ways to develop an enhanced search experience for your end users and provide useful data for your analytics team. The primary mechanisms for doing this are signals and aggregations.

By collecting signals and aggregating them, you compile a body of data that allows you to develop a sophisticated search experience, with rich search results for your end users, based on past user behavior.



Signals and aggregated signals are stored each in their own collection. These collections are associated with a primary collection, so that a collection named "products" will have two related collections: "products_signals" and "products_signals_aggr". By default, when using the UI to create a collection, a "signals" and "aggregated signals" collection are also created.

Signals:

Signals are events that are collected for analysis or to enhance the search experience for end users. Common types of signal events include clicks, purchases, downloads, ratings, and so on.

You can use App Insights to get visualizations and reports with which to analyze your signals data. App Insights mainly uses raw signals, but also uses some aggregated signals.

Aggregations:

Aggregations are processed signals. An aggregator reads the raw signals and returns interesting summaries, ranging from simple sums to sophisticated statistical functions.

Crucially, it must be possible to relate the documents in an aggregated signals collection to documents in the primary collection, in order to use the aggregated signals for recommendations and/or boosting of searches over the primary collection.

Conclusion:

User signals are very important in order to understand our customers requirements and it is a must have for every website that helps us to provide a best search result. Signals also helps us to design a recommendation system based on customer's feedback. Capturing signals should not be limited to search result page, we should capture signals in out Product details, Cart pages etc. so that we can get the right feedback on each part of application.