Lilo explains Google RankBrain Algorithm

An In-Depth Guide to the Google RankBrain Algorithm. Lilo web design company explains the ins and outs of the Google RankBrain Algorithm.

LONDON, UNITED KINGDOM, June 19, 2019 /EINPresswire.com/ -- RankBrain is the name of the machine learning-based component of Google's core search engine algorithm. If this definition just raised more questions than it provided answers, let's step back a bit and give you an introduction to all things RankBrain. First things first...

What is Machine Learning?

Machine learning is a field of study that brings together computer science and statistics to help machines (such as computers) "learn" to perform specific tasks – without being programmed to do so beforehand.

Just as the human brain uses experience to learn how to perform a task, computers use data and seek out statistical patterns within that data in order to "learn". It is the job of the computer, rather than the programmer, to identify these patterns. The computer uses the patterns to set up an algorithm, which it uses to sort future data. The more data provided, the more finely tuned and accurate the machine can be with its algorithm.

Google-Rankbrain-Guide

Google Hummingbird update

There are two types of machine learning:

Supervised learning: The machine uses a classified set of data to learn, and applies what it learns to sets of unknown data in the future.
Unsupervised learning: The machine uses unclassified data to learn.
Machine learning (ML) technology is widely used and quickly evolving. It's the technology behind facial recognition, voice to text recognition, online shopping and viewing recommendations, and more. ML applications are also taking hold in fields like law and medical diagnostics.

❝

RankBrain is the name of the machine learning-based component of Google's core search engine algorithm"
Elodie Berland

RankBrain is an algorithm that uses machine learning to determine the most relevant results to search engine queries. It uses a method of machine learning known as association rule learning.

What is Association Rule Learning?

Association rule learning (ARL) is a machine learning method that is used to discover relationships between different variables in large databases, using predetermined measures of interest.

In the past, ARL has been used by supermarkets to determine consumer behaviour, and to produce loyalty coupons or points cards to gather data can be analysed to predict buying patterns.

Google-Questions

RankBrain uses ARL principles to provide more intelligent search results, especially when a user's search phrase is ambiguous and can have a variety of possible meanings.

The History of RankBrain

Google's RankBrain algorithm went online in April 2015, but was only publicly announced in October 2015. The introduction came via an article by Bloomberg, which summarised RankBrain in the following way:

"RankBrain uses artificial intelligence to embed vast amounts of written language into mathematical entities – called vectors – that the computer can understand. If RankBrain sees a word or phrase it isn't familiar with, the machine can make a guess as to what words or phrases might have a similar meaning and filter the result accordingly, making it more effective at handling never-before-seen search queries."

Forbes elaborated further on what makes RankBrain tick, saying:

"Rather than being pre-programmed to respond to certain situations in a specific, predetermined way (like Google search has been up until now), it can update itself over time. Think of it as a robot that can constantly scour for better parts to upgrade itself with rather than relying on an outside human for occasional maintenance."

Before RankBrain was introduced, Google used its basic algorithm to determine which results to show for a search query.

With RankBrain, the query can be run through an interpretation model that applies a number of factors: for example, the searcher's location, personalisation, and wording. By discerning the searcher's true intent, Google can deliver more relevant results.

Google handles over two billion searches every day, and around 15% of these daily searches are unique. That means Google gets approximately 450 million searches every day that it hasn't seen before.

RankBrain is used to find the best answers to these new queries. It helps to identify patterns behind the unrecognised or difficult keywords, and connects them to other search queries.

RankBrain was launched in approximately a dozen different languages, to help users from as many different cultural backgrounds as possible.

Misconceptions about RankBrain

To clarify what RankBrain is and what it does, it's important to understand what it isn't, to avoid confusion.

RankBrain isn't a "robot". It's simply a series of mathematical equations that are to learn and improve using artificial intelligence.
RankBrain isn't a replacement or update to Google Knowledge Graph. The Knowledge Graph is also an artificial intelligence programme, but it isn't affiliated with RankBrain.
RankBrain isn't an algorithm update or a new algorithm. It's also not a standalone update. It is a modification that works in conjunction with the Hummingbird algorithm to produce more meaningful results.
RankBrain isn't a new type of search or search engine, and the typical user won't notice any significant updates to the process they rely on to get results.
RankBrain is not a Natural Language Processor (NLP). It is a step in that direction, but it can't infer meaning from a search query based on language alone.
As mentioned, RankBrain is a component of Google's Hummingbird search algorithm, which drives the overall system.

More about Hummingbird

Hummingbird is the name of a major Google algorithm change that took place in 2013. The update was announced at a press event in September 2013, after having been in use for about one month. According to Google, Hummingbird was given its name due to its high speed and precision.

Hummingbird brought about significant change in the world of search. Previous updates, such as Penguin and Panda, were changes to specific parts of the old algorithm, but Hummingbird was essentially an overhaul of the entire core algorithm. (The last change of this magnitude had been the Caffeine update in 2010.)

Hummingbird is essentially a semantic search algorithm, which had a big effect on the world of search. In fact, impacted about 90% of searches worldwide. The update used context and intent to deliver results that matched the needs of the user more accurately. It was focused on three key areas:

1. Conversational Search and Natural Language: The ability to use natural language processing meant search results were able to retrieve more niche results for queries By gauging the searcher's intent in a semantic way, Hummingbird could allow users to search for topics and sub-topics with better results.

2. Human Search: Early search engines had difficulty giving searchers useful results when the users themselves were lacking knowledge or understanding of the topic they were searching. For example, if someone with little knowledge of the United Kingdom were to search for "President of England", they would get little useful information about British rulers.

Hummingbird addressed this issue by focusing on synonyms and theme-related topics. So in this case, a user searching for "President of England" would get results about the Prime Minister (the Head of Government) and the Queen (Head of State).

Older search engines were relying on searchers to know what they were looking for. The Hummingbird update made the process a bit more "human", by curating related results that

would help users with gaps in their knowledge.

3. Local Search: By combining conversational language processing and a better understanding of user intent based on their location data, Hummingbird improved the precision of Google's local search results. This understanding of natural language also formed the foundation for voice search.

Hummingbird and RankBrain

RankBrain works in conjunction with the Hummingbird update, taking semantic search one step further than Hummingbird. (Semantics is the study of meaning in languages. Therefore semantic search is "meaningful search" – or more accurately, search that yields more meaningful results.)

RankBrain analyses ambiguous, unclear and indecipherable semantic user queries, learning from past experience, and applying that experience to similar queries that come up in the future.

The RankBrain Search Process

This is a very simplified breakdown of how RankBrain behaves when a user is searching on Google. The process has two parts.

Part 1:

A user enters a query into Google.
Google relies on help from RankBrain (along with many other factors) to decide on the most appropriate results.
RankBrain uses a mathematical process to determine exactly what the search query means, and returns with a set of results.
Google uses this information and displays a set of results determined to be the most relevant to the user's query.

Part 2:

The user engages with the results displayed by Google.
RankBrain observes the user's behaviour.
RankBrain uses some key factors to understand the user's satisfaction level, namely: click-through rate, bounce rate, and the time spent on a web page.
If the user visits a web page but returns to the search engine results page (SERP) quickly, this tells RankBrain that the user didn't find it useful, and it isn't very relevant to the search query.
If the user spends more time on a page, RankBrain determines that they found it useful, and that it is relevant to the query.
PageRank promotes and demotes web pages for specific search queries in question, as its knowledge about user satisfaction grows.

Does RankBrain Impact SEO?

Knowing your stuff when it comes to RankBrain can help you to make smart decisions around improving your SEO practices.

Back in 2015, just 15% of Google searches were fully utilising RankBrain. Today however, Google's confidence has increased, and RankBrain is used in all searches. In fact, Google has named it as the third-most important signal contributing to the result of a search query, with links and content being the other two most important factors.

Senior Google research scientist Greg Corrado confirmed RankBrain's importance in an interview with Bloomberg in 2015. Corrado also noted that RankBrain is one of "hundreds" of different

signals that Google uses to determine search engine results. There is a key difference that sets RankBrain apart though.

While the other ranking factors come directly from Google engineers, RankBrain is a technology that can independently learn from queries to give results on its own. This means it is especially important for organic search results.

As RankBrain results get "smarter" and come up with better answers, the signal will start to hold more weight. We could be looking at a future where RankBrain becomes the #1 ranking factor. Google Insider Answers the Community's Big Questions

As a general rule, the folks at Google play their cards close to the chest and don't advise SEOs on how to effectively optimise. However, Google trend analyst Gary Illyes did open up about RankBrain in a rare interview. Illyes said:

"Try to write content that sounds human. If you try to write like a machine, then RankBrain will just get confused and probably just push you back."

Illyes also recently engaged with the online community with a Reddit AMA that took place in February this year. Naturally, SEO-savvy Redditors had a lot of questions about RankBrain.

Here's what Gary Illyes had to say on the subject of all the speculation about RankBrain and what makes it tick:

"RankBrain is a PR-sexy machine learning ranking component that uses historical search data to predict what would a user most likely click on for a previously unseen query. It is a really cool piece of engineering that saved our butts countless times... but it's generally just relying on (sometimes) months old data about what happened on the results page itself, not on the landing page."

Illyes dismissed speculation about "dwell time, CTR, whatever Fishkin's new theory is..." (referring to Rand Fishkin, CEO and Co-Founder of SEOmoz), and ended off by saying, "Search is much more simple than people think."

However, it must be noted that clicks do matter – they might not be specific to the way RankBrain works, but if users aren't visiting your site, it certainly won't be recognised as relevant or useful by search engines.

Key Optimisation Strategies for RankBrain

There is a bit of a misconception out there that as an unsupervised deep learning algorithm RankBrain "makes up its own rules" and SEOs can't "optimise for RankBrain". However, leading industry professionals disagree. Danny Sullivan says:

"Google's own engineers tell me and others they don't even really understand how it works. Ultimately, the best way to "rank" for RankBrain remains that same boring thing no one wants to hear despite it being true. Have really good, descriptive content."

What are the best ways to optimise your website to ensure that RankBrain will work in your favour?

Build A Strong Reputation:
This is all about getting to know your target audience better. Look into the type of content they like to read and spend more time on when they're online. Focus on creating more content around topics that are relevant to them.

For example, if you have an audience of extreme sports fans, write about local adventure experiences they will enjoy, review popular brands of sports equipment and technology, write profiles on well-known extreme sports figures, or cover major upcoming events.

Make sure your content is engaging, and go beyond just text. You can embed images, videos, gifs and other media. Share your content on social media channels, to generate more engagement.

You will also need to work on obtaining quality backlinks to improve your website's reputation. Get in touch with high-authority websites in related industries, with similar target audiences, and ask about guest posting opportunities. This can give you more traffic and better visibility.

Overall, the longer your users spend on your website, the more relevant the site appears to RankBrain. It pays to give the users what they want.

Focus on User Intent:
With RankBrain, there is less of a need to focus on finding relevant keywords. For example, if you're writing content about river rafting, RankBrain will pick up "river rafting" and related terms as keywords. So in this case, words like "white water rafting" and "kayaking" will also be considered as keywords. RankBrain could help your content to rank for queries related to all of these terms.

So, instead of focusing on specific keywords, focus more on content that addresses user intent. Readers care about quality content, which means this focus will help to improve your click-through rate (CTR).

RankBrain collects information about user satisfaction. If the top results don't address the intent behind the user's search, the user will spend little time on those pages, as they continue to search for what they need. Once they find what they want, they will spend longer on the page that answers their query. As this happens, those less relevant results may experience a drop in their rankings, while those that satisfy the user's intent see a boost in their rankings.

Create In-Depth Long-Form Content:
RankBrain uses something called co-occurrence to help deliver highly relevant results; Co-occurrence refers to how often two or more things occur together or occur simultaneously – in this case, how often certain terms or related groups of words appear in any given content. So for example, if a user looks for articles on "the best river rafting holidays" RankBrain helps Google to produce results that include related terms, and treats them as significant to the query.

Original article found @ https://www.lilo.co.uk/blog/in-depth-guide-google-rankbrain-algorithm/

Elodie Berland
Lilo Website Design
+44 207 631 3366
email us here
Visit us on social media:
Facebook
Twitter