

Unit 2: Search Engine Results: Crawling, Indexing, and Ranking



Understanding Search Engine Results

- Search Engine Results Pages (SERPs) are the pages that browsers (Google, bing, etc.) show in response to a user's search query.
- SERP results are determined by matched keywords, demonstrated authority on behalf of a site, and other key performance indicators (KPIs).
- SERPs may also include advertisements, knowledge graphs, or other unique features. As search engines have evolved over the years, so has their ability to determine the "best" results for any given query.

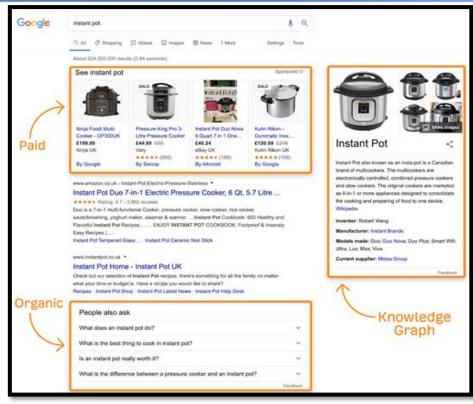


SEO PROCESS



Understanding Search Engine Results

- Featured snippets
- Knowledge card
- Knowledge Panel
- Image Pack
- Top stories
- People Also Ask (PAA)
- Shopping results
- Tweets boxes
- Sitelinks
- Videos



Reference & for more details: https://ahrefs.com/blog/serps/



- Crawling is the process by which search engines discover updated content on the web, such as new sites or pages, changes to existing sites, and dead links.
- To do this, a search engine uses a program that can be referred to as a crawler, bot or spider (each search engine has its own type) which follows an algorithmic process to determine which sites to crawl and how often.
- As a search engine's crawler moves through your site it will also detect and record any links it finds on these pages and add them to a list that will be crawled later. This is how new content is discovered.



Crawling

<u>Crawl rate:</u> The term crawl rate means how many requests per second Googlebot makes to your site when it is crawling it: for example, 5 requests per second.

If you want Google to crawl new or updated content on your site, you can request a recrawl.

What if, if I want to change a Crawl rate?

- Google has sophisticated algorithms to determine the optimal crawl speed for a site.
- The goal is to crawl as many pages from your site as it can on each visit without overusing your server's bandwidth.
- If Google is making too many requests per second to your site and slowing down your server, you can limit how fast Google crawls your site.
- The crawl rate that you set is the maximum crawl rate that Googlebot should make. Note that it does not guarantee that Googlebot will reach this maximum rate.
- Google recommend against limiting the crawl rate unless you are seeing server load problems that are definitely caused by Googlebot hitting your server too hard.
- A modified crawl rate would last for 90 days, then it will return to default crawl rate.
- Visit Google Search Console to modify the default changes.



Crawling

Steps To Increase Google Crawl Rate Of Your Website

- 1. Add New Content To Your Website Regularly
- 2. Improve Your Website Load Time
- 3. Include Sitemaps To Increase Google Crawl Rate
- 4. Improve Server Response Time
- 5. Stay Away From Duplicate Content
- 6. Block Unwanted Pages via Robots.txt
- 7. Optimize Images And Videos



Crawling

Finds web pages and queues for indexing

Indexing

Analyses the web page content and saves the pages with quality content in index.

Ranking

Fetches relevant pages from index based on search query and order them based on ranking factors.

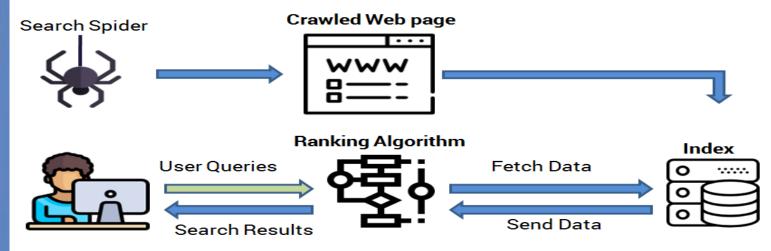








Crawling, Indexing and Ranking: Search Engine Process Flow





- The terms "crawl" and "index" are often used interchangeably, although they are different (but closely related) actions.
- After a page is discovered by a crawler, Google tries to understand what the page is about. This process is called indexing. Google analyzes the content of the page, catalogs images and video files embedded on the page, and tries to understand the page.
- Once a search engine processes each of the pages it crawls, it compiles a massive index of all the words it sees and their location on each page. It is essentially a database of billions of web pages.
- This extracted content is then stored, with the information then organized and interpreted by the search engine's algorithm to measure its importance compared to similar pages.
- Servers based all around the world allow users to access these pages almost instantaneously. Storing and sorting this information requires significant space and both Microsoft and Google have over a million servers each.

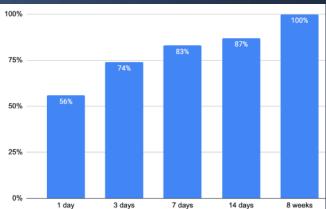


- On an average, 16% of valuable pages on popular websites aren't indexed.
- You can intentionally prevent Google from visiting your page using your robots.txt file, making it
 impossible for Google to crawl it. Google can then still index the page using a link found on a
 different page. Example: Google Jamboard.

• Notice that the indexed home page of Google Jamboard has no description displayed inside the

snippet.

On an average delay by Google in Indexing is as follow:





How to make sure your pages get indexed by Google?

- 1). Make sure the page is indexable:
- Googlebot is a good citizen of the web.
- If you tell Google: "Hey, don't index this page," the page won't be indexed. And there are many ways to do that.
- "noindex" directive: It's a directive showing that Google can visit a page, but a page shouldn't be included in the Google index.
- Robots.txt file: The robots.txt file can be used to give instructions to various web crawlers, telling them whether or not they should access your website or its parts.
- 2). Help Google crawl your website more efficiently:
- Sitemap.xml: The XML Sitemap is a file that should contain links to all the indexable pages of your website.
- Only put valuable URLs in the sitemap!
- Sitemaps help Google to crawl your website more intelligently.



- As SEO's this is the area we are most concerned with and the part that allows
 us to show clients tangible progress.
- Once a keyword is entered into a search box, search engines will check for pages within their index that are a closest match; a score will be assigned to these pages based on an algorithm consisting of hundreds of different ranking signals.
- These pages (or images & videos) will then be displayed to the user in order of score.
- So in order for your site to rank well in search results pages, it's important to make sure search engines can crawl and index your site correctly – otherwise they will be unable to appropriately rank your website's content in search results.



Determining Searcher Intent and Delivering Relevant, Fresh Content

Document Analysis and Semantic Connectivity

- In document analysis, search engines look at whether they find the search terms in important areas of the document like the title, the meta tags, the heading tags, and the body of the text.
- Semantic connectivity refers to words or phrases that are commonly associated with one another. For example, if you see the word 'bread' you associate it with 'butter', not 'buttermilk'.

Link Analysis

- In link analysis, search engines measure who is linking to a site or page and what they are saying about that site/page.
- Grouping of relevant sites is referred to as a link neighborhood.
- The neighborhood you are in says something about the subject matter of your site, and the number and quality of the links you get from sites in that neighborhood say something about how important your site is to that topic.



Determining Searcher Intent and Delivering Relevant, Fresh Content...

Problem Words, Disambiguation, and Diversity

- One of the greatest challenges comes in the form of disambiguation.
- For example someone types round, does it mean the apple, orange or a ball?
- Another example of this is jaguar, which is at once a jungle cat, a car, a football team. Which does the user mean?
- For example if someone types in a query such as cars then the query cars is so general that there is no real way to get the bottom of the searcher's intent based on this one query alone.
 - Want to read a review of some car?
 - Want to go to a car show?
 - Want buy a car?
 - Want to be aware about new technologies in car?



Determining Searcher Intent and Delivering Relevant, Fresh Content...

- Where freshness matters
- Generally Search engine relies upon the older sources for results.
- But in some cases, search engine need new sources for results.
- For example, when there is breaking news, such as flood, earthquake, or war; the search engines begin to receive queries within seconds, and the first articles begin to appear on the Web within 15 minutes.
- Google refers to this concept as query deserves freshness (QDF).
- Query Deserves Freshness (QDF), is a Google re-ranking function.
- It essentially means: Search requests that deserve up-do-date search results. It can drastically change the appearance of a search result and can occur for search terms that change their meaning over time.





Analyzing Ranking Factors

- Content Quality
- Content Uniqueness
- Fully Crawlable Page
- Mobile Optimized Site

(Write Mobile-friendly test on google to test)

- Number of Backlinks
- Domain Authority

- Anchor Text
- Site Loading Speed
- Keyword Usage
- Google Rank Brain
- Search Intent Match
- Content Freshness
- E-A-T



Negative Ranking Factors

- Server is often inaccessible to crawlers
- Content very similar to or duplicate of other web pages
- External links to low-quality/spam sites
- Duplicate titles/meta tags on many pages



Advance Search Techniques

google.com/advanced_image_search google.com/advanced_video_search google.com/advanced_book_search google.com/advanced_search

Advance Search		
@ for social media	\$ for a price	# for hash tags
- Exclude word	"" exact match	Search within
		range
OR combine search	Site: for specific site	Related: for similar
		search

Note: Not all search operators return exhaustive results.



Country-Specific Search Engines

- One of the problems international businesses continuously need to address is identifying themselves as "local" in the eyes of the search engines:
 - Owning the proper domain extension (.com, .au, .co.uk, .fr, .nl, .in).
 - Hosting your website in the country you are targeting.
 - Registering with local search engines.
 - Having other sites from the same country link to you.
 - Using the native language on the site.
 - Placing your relevant local address.



Thank 404