



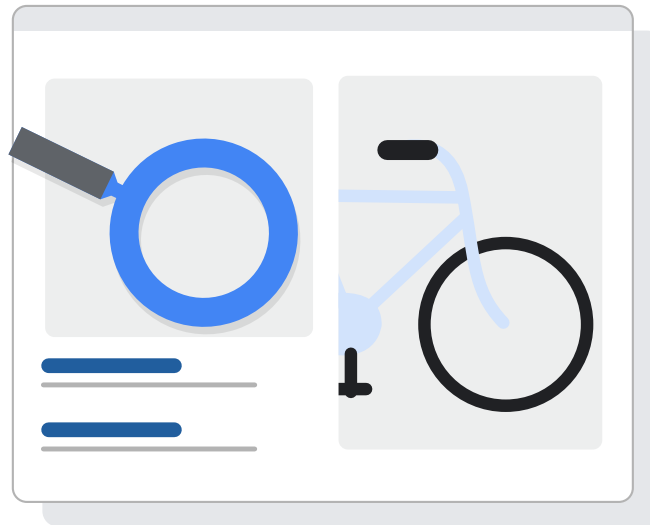
How Search works

Our mission is to organize the world's information and make it universally accessible and useful. It starts with Google Search...

Over the years, the web and the world have changed. Google Search has evolved and improved, but [our approach](#) remains the same.

We continuously map the web and other sources to [connect you](#) to the most relevant, helpful information. We present results in a [variety of ways](#), based on what's most helpful for the type of information that you're looking for. All while keeping your personal information [private and secure](#).

We believe that Search should...



1

Deliver the most relevant, reliable information available

Every day, fifteen per cent of searches are ones that we haven't seen before, so we use automated systems to get you the most relevant and reliable information that we can find. To help you find what you're looking for, these systems consider many factors, including the words in your query, the content of pages, the expertise of sources, and your language and location. To measure whether people continue to find our results relevant and reliable, we have a [rigorous process](#) that involves extensive testing and the use of quality raters who ensure that our automated systems produce great results as a human would expect.

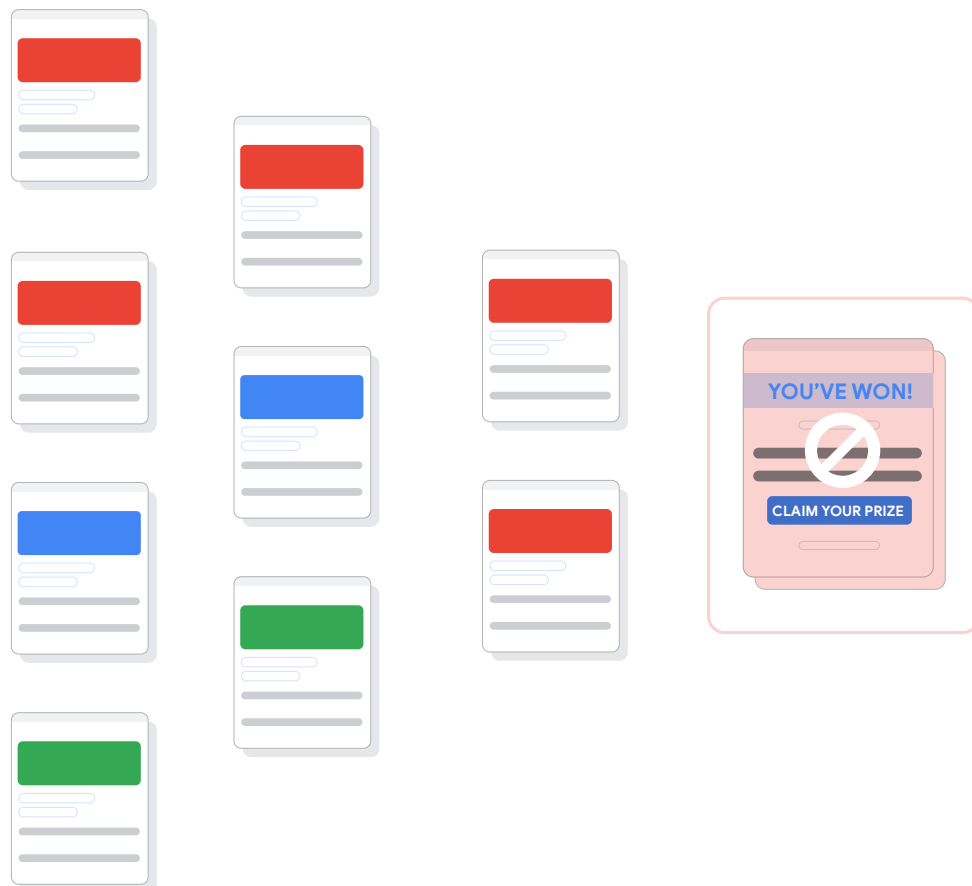
2

Maximize access to information

Google's mission is to organize the world's information and make it universally accessible and useful. That's why Search makes it easy to discover a broad range of information from a wide variety of sources. Some information is simple, like the height of the Eiffel Tower. For more complex topics, Search is a tool to explore many angles so that you can form your own understanding of the world.

To keep information accessible, we only remove content from our Search results in limited circumstances, such as compliance with local laws or site owner requests.

Every day, 15% of searches are new



3

Present information in the most useful way

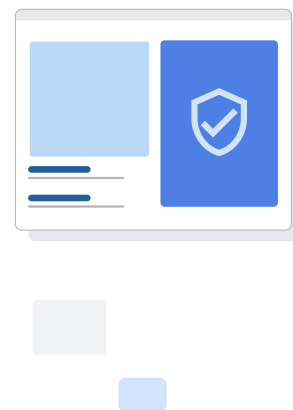
Today, information exists not just on web pages but in images, videos, news, sports scores and many other types of content. So if you're searching for directions, we show a map. Or when you're looking for the weather or stock prices, we show the most up-to-the-minute information. We use approachable language and design to guide you through your experience on Search, and test our approach broadly to make sure that we're presenting information [in the most useful way](#).

4

Protect your privacy

Guided by our privacy principles, we create tools and explanations to help you understand how we use data to make Search more helpful to you. For example, using your Search history, Google can auto-complete your searches. So if you start to search for 'barcelona', auto-complete might predict past places or sights that you searched for before you've even finished typing them. When you use our products, you trust us with your data, and it's our responsibility to [keep your data private, safe and secure](#).

That's why we build controls so that you can choose the privacy settings that are right for you or even permanently delete your data. To keep your data secure, we've built some of the most advanced security infrastructure in the world. And we'll never sell your personal information to anyone. We make money from advertising, not by selling personal information.



5

Sell ads, nothing more

Ads are how Search remains accessible to everyone. But ads are [the only thing that we sell](#).

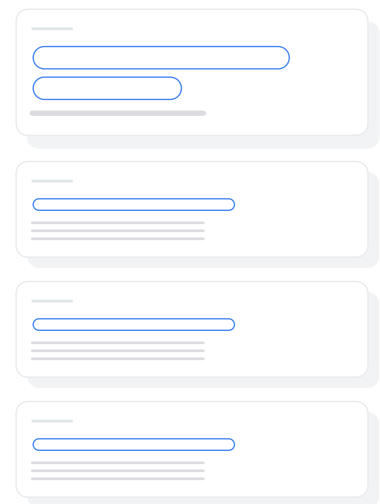
We don't charge anyone to appear in our search index. Whether a business, individual or organization buys ads is not a factor in our Search algorithms. We never provide special treatment to advertisers in how our Search algorithms rank their websites, and nobody can pay us to do so.

Ads are only displayed if we believe that they're relevant to the Search terms that you entered. For most searches, we show no ads at all. When we do show ads, they're always labeled so that you can tell them apart from Search results.

6

Help creators succeed online

To support a healthy ecosystem of fresh and useful content in all the world's languages, we [help people, publishers and businesses](#) of all sizes succeed and be found by others. We do this by sending visitors to websites small and large through our Search results, or by connections such as listing business addresses and phone numbers. We don't charge to be in our Search listings, and we also provide free tools and resources to help site owners be successful.





How Google Search works

Every time you search, there are thousands, sometimes millions, of web pages or other content that might be a match. Google uses its robust systems to present the most helpful information in response to your query.

How Google Search organizes information

When you search, Google looks through hundreds of billions of web pages and other content stored in our Search index to find helpful information — more information than all of the libraries of the world.

Finding information by crawling

Most of our Search index is built through the work of software known as crawlers. These automatically visit publicly accessible web pages and follow links on those pages, much like you would if you were browsing content on the web. They go from page to page and store information about what they find on these pages and other publicly accessible content in Google's Search index.

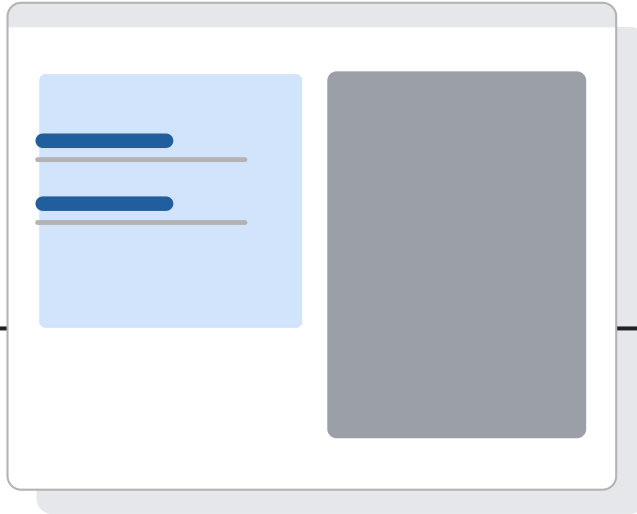
Organizing information by indexing

When crawlers find a web page, our systems render the content of the page, just as a browser does. We take note of key signals – from keywords to website freshness – and we keep track of it all in the Search index.

The Google Search index contains hundreds of billions of web pages and is well over 100,000,000 gigabytes in size. It's like the index in the back of a book – with an entry for every word seen on every web page that we index. When we index a web page, we add it to the entries for all of the words that it contains.

Constantly crawling for new info

Because the web and other content is constantly changing, our crawling processes are always running to keep up. They learn how often content that they've seen before seems to change and revisit as needed. They also discover new content as new links to those pages or information appear.



Google also provides a free toolset called Search Console that creators can use to help us better crawl their content. They can also make use of established standards like sitemaps or robots.txt to indicate how often content should be visited or if it shouldn't be included in our Search index at all.

Google never accepts payment to crawl a site more frequently – we provide the same tools to all websites to ensure the best possible results for our users.

More than web pages

Our Search index contains more than just what's on the web, because helpful information can be located in other sources.

In fact, we have multiple indexes of different types of information, which is gathered through crawling, through partnerships, through data feeds being sent to us and through our own encyclopedia of facts, the [Knowledge Graph](#).

These many indexes mean that you can search within millions of books from major libraries, find travel times from your local public transport agency, or find data from public sources like the World Bank.

How results are automatically generated

With the vast amount of information available, finding what you need would be nearly impossible without some help sorting through it.

Google's ranking systems are designed to do just that: sort through hundreds of billions of web pages and other content in our Search index to present the most relevant, useful results in a fraction of a second.

Key factors in your results

- **Meaning** To return relevant results, we first need to establish what you're looking for – the intent behind your query. To do this, we build language models to try to decipher how the relatively few words that you enter into the search box match up to the most useful content available.
- **Relevance** Next, our systems analyze the content to assess whether it contains information that might be relevant to what you are looking for. The most basic signal that information is relevant is when content contains the same keywords as your search query. For example, with web pages, if those keywords appear on the page, or if they appear in the headings or body of the text, the information might be more relevant.
- **Quality** After identifying relevant content, our systems aim to prioritize those that seem most helpful. To do this, they identify signals that can help determine which content demonstrates expertise, authoritativeness and trustworthiness.
- **Usability** Our systems also consider the usability of content. When all things are relatively equal, content that people will find more accessible may perform better.
- **Context** Information such as your location, past Search history and Search settings all help us to ensure that your results are what is most useful and relevant for you in that moment.

Learn more about our approach to ranking results [here](#).

Improving Search with rigorous testing





Our goal is always to provide you with the most useful and relevant information. Any changes that we make to Search are always to improve the usefulness of results that you see. [That's why we never accept payment from anyone to be included in Search results.](#)

Testing for usefulness

We put all possible changes to Search through a rigorous evaluation process to analyze metrics and decide whether to implement a proposed change.

Data from these evaluations and experiments go through a thorough review by experienced engineers and search analysts, as well as other legal and privacy experts, who then determine if the change is approved to launch.

In 2021, we ran:

-  5,000+ launches
-  11,553 live traffic experiments
-  757,583 search quality tests
-  72,367 side-by-side experiments

Discover more about our rigorous testing processes [here](#).

Detecting spam to bring you relevant and reliable results

Google invests in systems to ensure that sites don't rise in Search results through deceptive or manipulative behavior. This is especially important because spam sites can harm or mislead people.

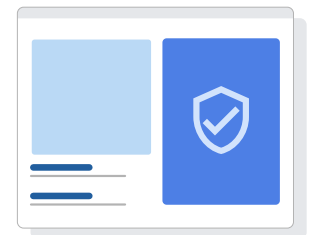
In 2020 alone, our systems found 40 billion spammy pages every day.

Why - and how - we fight against spam

Spam sites attempt to game their way to the top of Search results through a variety of techniques such as repeating keywords over and over, or showing Google content that's different from what users see (something that's known as 'cloaking'). Hackers sometimes even get into legitimate sites and change them into spam sites that might redirect people into scams or worse.

We have clear [guidelines](#) that call out spammy behavior, and provide a clear process to [appeal removals](#) once violations have been addressed.

Find out how we detect and remove spam to ensure high-quality Search results [here](#).



For more information visit g.co/HowSearchWorks