

Digital Innovation Development for Entrepreneurs

The background features abstract, overlapping geometric shapes in various shades of purple, ranging from light lavender to dark, almost black tones. The shapes are primarily triangles and polygons, creating a dynamic and modern aesthetic. The text is centered in the white space between these shapes.

Search Engine Optimization (SEO)

Digital Innovation Development for
Entrepreneurs

Lesson Objectives

- To understand the importance of search engine optimization (SEO) to an organization
- To know the techniques related to SEO, on-page SEO, and off-page SEO.
- To understand how different approaches to aspects of content, HTML and links can improve search engine ranking

unofficial SEO

SEO

takes time & effort

time

- year 1 website not rated by search engines like Google, Baidu
- rise to top ranking can take 2 years +

effort - on a page

- consistency
- the big things
 - titles, H1, subheadings (H2), key terms, synonyms
- the small things
 - images, alt text, link text

SEO

effort - on a site

- consistency
- the big things
 - linking, structure, IA / vocab, navigation, site map, footer
- why successful
 - DA (domain authority) - good site people stay
 - TA (topic authority) - good related content
 - user intent
 - users choose to visit the site
 - users choose to stay on the site

SEO

why difficult?

- free tools - not good enough
- good tools - too expensive
- people are too impatient
 - nobody wants to wait for 2 years to see success
- people are too lazy
 - nobody wants to spend the time
 - doing the research
 - taking the time to do all the small things, all of the time

SEO

changes

- more content = >DA, still?
- all about key terms
 - now about user intent
- changing
 - updates (e.g. Google updates)
- like criminals v police
 - what shortcuts & seo tricks 'beat' google
 - AI is cheap but poor quality
 - less money, less time, less effort - can it succeed?

SEO

what you can do now

- start
 - page, content, socials, internal links
- plan, monitor performance
- gain skills & knowledge

what can you do over time

- authority / brand building
- use targeted marketing & socials to get visitors
- external links

SEO

tools

- free tools - not good enough
- good tools - too expensive

seo plugins

- I haven't seen any benefits (early days)

what has worked

- speed
- images
- 'good' targets
 - based on research & hard work

future

VSO

- questions & natural answers

AI

- questions & natural answers
- user intent
- original content
- non-AI
- media
- keeping visitors onsite
- *links (quality)*

People also ask

What are 5 best search engines?

What are the top 7 search engines?

What is the 10 search engine?

What is a better search engine than Google?

What is SEO?

<https://www.youtube.com/watch?v=sd0ypO9MTWY>

SEO

What is Search Engine Optimization

- about 50% of website visits come from a search engine (SE)
- higher visibility = more traffic
- more traffic / visitors = better advertising
- greater potential for sales
- but how do you get higher visibility?
 - higher rank, get nearer the top of the first page in relevant searches

SEO

Why Search Engine Optimization?

- large companies pay specialists money for SEO
- does your web designer optimize?
- could you optimize?
- could it benefit your site
- could it damage your site
- so why don't more people optimize?
 - people don't want to pay or spend the time

(answer is no)

(answer is yes)

(answer is yes)

no, unless you damage it

SEO

Best Practices

- if you want SEO to work,
- your goals match the goals of your visitors.
- It's about figuring out what you want,
- optimizing for keywords that
- bring in visitors who want the same things

SEO analysis

Search engines

two major functions:

- crawling & building an index
- presenting a ranked list of the most relevant websites

1. crawling

- web is like a spiders web of nodes & connections between nodes
- links allow crawlers/spiders/ search engine robots to travel over the web
- find a page
- locate & store 'relevant' information

Search engines

building an index

- store billions of details about websites & their information
- access these for a search
- index information
- retrieve 'relevant' websites from a query
- ranks the 'most relevant'
- if relevant the more popular the website the higher ranking
- 'relevance' and 'popularity' important concepts
- algorithms calculate relevance & popularity

Search engine ranking

What influences SE ranking?

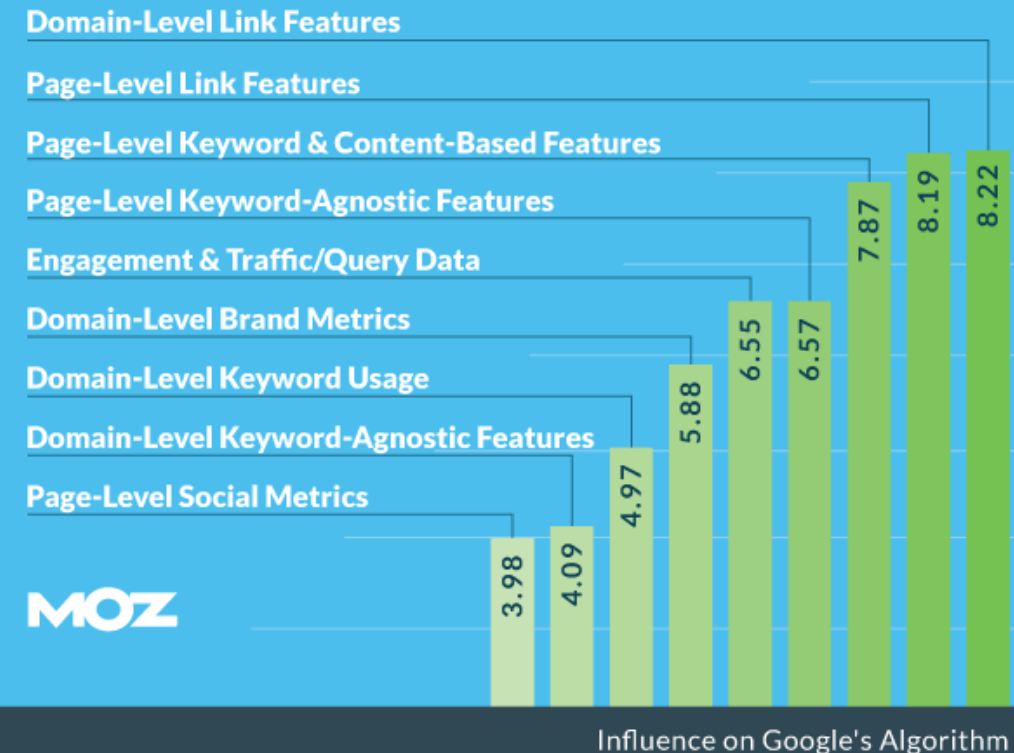
- Domain-Level Link Features
- Page-Level Link Features
- Page-Level Keyword & Content-Based Features
- Page-Level Keyword-Agnostic Features
- Engagement & Traffic/Query Data
- Domain-Level Keyword Usage
- Domain-Level Keyword-Agnostic Features
- Page-Level Social Metrics

Source: <https://moz.com/search-ranking-factors>

The Influence of Ranking Factors in Google's Algorithm

Search Engine Ranking Factors Experts Survey

Moz asked over 150 experts to rate the influence exerted by broad areas of ranking factors on Google's core search algorithm. Each area was rated on a scale of 1 (not influential) to 10 (highly influential).



Search engine ranking

What influences SE ranking?

- Domain-Level Link Features
- Page-Level Link Features
- Page-Level Keyword & Content-Based Features
- Page-Level Keyword-Agnostic Features
- Engagement & Traffic/Query Data
- Domain-Level Keyword Usage
- Domain-Level Keyword-Agnostic Features
- Page-Level Social Metrics

Source: <https://moz.com/search-ranking-factors>

Broad search ranking factors from most influential to least:

1. Domain-Level Link Features: 8.22 / 10

Based on link/citation metrics such as quantity of links, trust, domain-level PageRank, etc.

2. Page-Level Link Features: 8.19 / 10

PageRank, trust metrics, quantity of linking root domains, links, anchor text distribution, quality/spamminess of linking sources, etc.

3. Page-Level Keyword & Content-Based Features: 7.87 / 10

Content relevance scoring, on-page optimization of keyword usage, topic-modeling algorithm scores on content, content quantity/ quality/ relevance, etc.

4. Page-Level Keyword-Agnostic Features: 6.57 / 10

Content length, readability, Open Graph markup, uniqueness, load speed, structured data markup, HTTPS, etc.

5. Engagement & Traffic/Query Data: 6.55 / 10

Data SERP engagement metrics, clickstream data, visitor traffic/usage signals, quantity/diversity/CTR of queries, both on the domain and page level

6. Domain-Level Brand Metrics: 5.88 / 10

Offline usage of brand/domain name, mentions of brand/domain in news/media/press, toolbar/browser data of site usage, entity association, etc.

7. Domain-Level Keyword Usage: 4.97 / 10

Exact-match keyword domains, partial-keyword matches, etc.

8. Domain-Level Keyword-Agnostic Features: 4.09 / 10

Domain name length, TLD extension, SSL certificate, etc.

9. Page-Level Social Metrics: 3.98 / 10

Quantity/quality of tweeted links, Facebook shares, Google +1s, etc. to the page

Source: <https://moz.com/search-ranking-factors>

Search engine ranking

- **Domain-Level, Keyword-Agnostic Features:** Domain name length, TLD extension, SSL certificate, etc.
- **Domain-Level, Link Authority Features:** Based on link/citation metrics such as quantity of links, trust, domain-level PageRank, etc.
- **Domain-Level Keyword Usage:** Exact-match keyword domains, partial-keyword matches, etc.
- **Domain-Level Brand Metrics:** Offline usage of brand/domain name, mentions of brand/domain in news/media/press, toolbar/browser data of usage about the site, entity association, etc.
- **Page-Level Social Metrics:** Quantity/quality of tweeted links, Facebook shares, Google +1s, etc. to the page
- **Page-Level Link Metrics:** PageRank, Trust metrics, quantity of linking root domains, links, anchor text distribution, quality/spamminess of linking sources, etc.

Search engine ranking

Page-Level Keyword & Content-Based Metrics:

- Content relevance scoring, on-page optimization of keyword usage, topic-modeling algorithm scores on content, content quantity/quality/relevance, etc.

User Usage & Traffic/Query:

- Data SERP engagement metrics, clickstream data, Visitor traffic/usage signals, quantity/diversity/CTR of queries, both on the domain and page level

Page-Level, Keyword-Agnostic Features:

- Content length, readability, Open Graph markup, uniqueness, load speed, structured data markup, HTTPS, etc.

Page-Level Keyword Usage Features

- These features describe use of the keyword term/phrase in particular parts of the HTML code on the page (title element, H1s, alt attributes, etc).

SEO

Page-Level Keyword Usage Features :

use of the keyword term/phrase in HTML code

- title element, H1s, alt attributes, etc.
- and semantic relevance and language modeling of the given keywords
- document-keyterm relevance based on Language Model (e.g. term frequency)
- keyword matches
- TF-IDF
- H1-keyterm similarity
- Title - keyterm similarity, etc.

SEO

Page-Level Keyword Agnostic Features:

non-keyword / link-metrics features

length of the page, load speed, etc.

- # no of links
- # no of internal links
- characters in body
- https?
- conformity (e.g. schemas)
- URL has hyphen
- URL length

SEO

Page-Level Link-Based Features:

link-metrics

- page authority (est. of SEO score /100)
- # links to URL
- # domains to URL
- # subdomains to URL
- etc.

SEO

Domain-Level Keyword Usage Features:

keywords in root/subdomain name

- exact match (.com)
- exact match
- partial match to root
- partial match to subdomain
- match to any part of URL

SEO

Other:

- visits
- bounce rate
- spam flags / score
- brand

SEO

Build for users, not for search engines

- **"Do"** Transactional Queries:
 - I want to do something, such as buy a plane ticket or listen to a song.
- **"Know"** Informational Queries:
 - I need information, such as the name of a band or the best restaurant in New York City.
- **"Go"** Navigation Queries:
 - I want to go to a particular place on the Internet, such as Facebook or the homepage of the NFL.

SEO

Building for SE & Users

- **Provide alt text for images.** Assign images in gif, jpg, or png format "alt attributes" in HTML to give search engines a text description of the visual content.
- **Supplement search boxes** with navigation and crawlable links.
- **Supplement Flash or Java plug-ins** with text on the page.
- **Provide a transcript for video and audio content** if the words and phrases used are meant to be indexed by the engines.

SEO

Building for SE & Users

using tools to see what elements of your content are visible and indexable to the engines



Through Browser



Through Google Cache

SEO

Building for SE & Users

access to pages

- no link
- forms
- frames
- plugins
- too many links

ranking

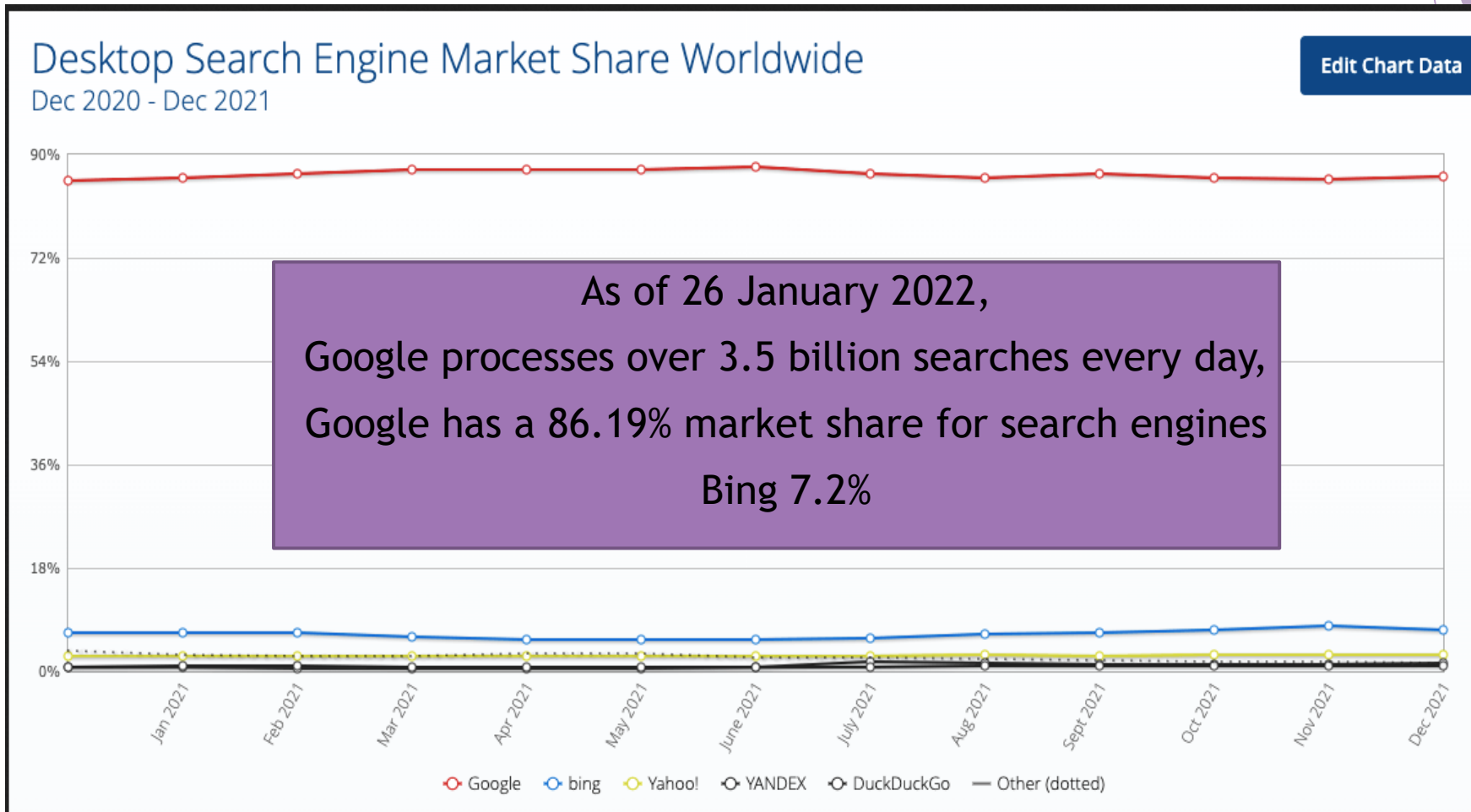
indexes

- store billions of details about websites & their content
- access these for a search
- retrieve 'relevant' websites from a query
- ranks the 'most relevant'
- if relevant, the algorithm calculates the ranking
- algorithms calculate 'relevance' & 'popularity'
 - Uses statistics do determine what web pages would be
 - of interest to the user and
 - other users spent time viewing

Factors that affect ranking

- key terms
- quality content
- link building
- site speed and performance
- meta information
- Other
 - duplicate pages, broken links, poor navigation
 - Local SEO citations

market

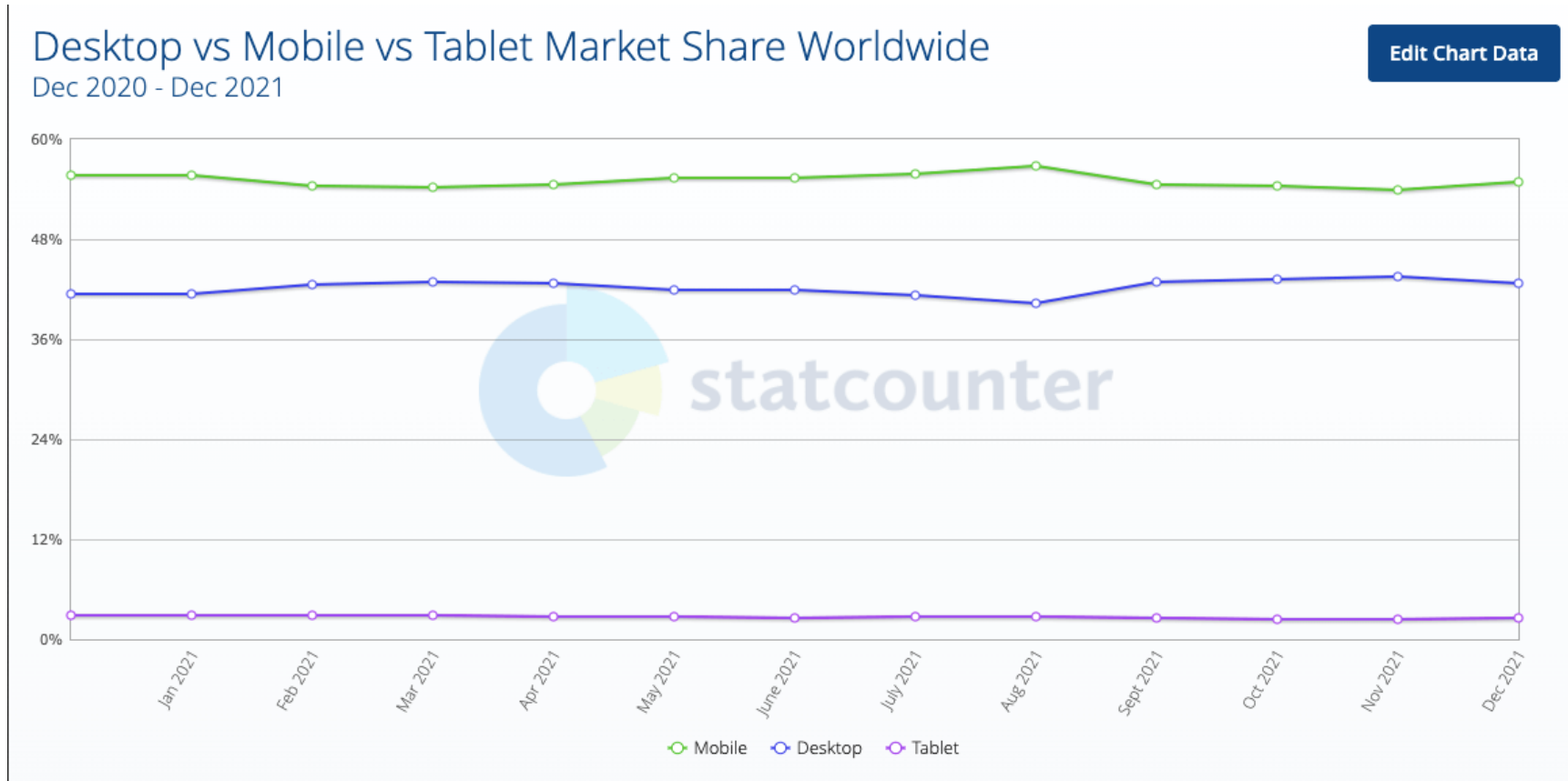


<https://www.smartinsights.com/search-engine-marketing/search-engine-statistics/>

market

mobile shopping now has a 60% market share

Google currently holds 94.88% of the mobile search market share.



<https://www.smartinsights.com/search-engine-marketing/search-engine-statistics>

Stat attack

- the first five organic results account for 67.6% of all the clicks (Source: Zero Limit Web)
- Google's search algorithm uses more than 200 factors to rank websites (Source: Backlinko)
- 49% of marketers report that organic search has the best ROI of any marketing channel (Search Engine Journal)
- SEO can reduce the cost of customer acquisition by 87.41% on average compared to digital advertising (Terakeet)

<https://www.impactplus.com/blog/seo-statistics>

Stat attack

- 70% of marketers see SEO as more effective than PPC (Source: Databox)
- 75% of marketers feel their SEO tactics are 'extremely effective' or 'very effective' at helping them achieve their marketing goals (Source: HubSpot State of Inbound)
- The average content length of the top position Google article contains 1,447 words (Source: backlinko and Ahrefs)

<https://www.impactplus.com/blog/seo-statistics>

On-page vs offsite SEO

- on-page SEO looks at what your site (or your page) is about
- off-page SEO looks at how authoritative and popular your site is

authority

Domain authority

- link-metrics
- page authority (est. of SEO score /100)
- #links to URL
- #domains to URL
- #subdomains to URL

On-page vs offsite SEO

- on-page SEO focuses on optimizing parts of your website that are within your control
- off-page SEO focuses on increasing the authority of your domain through content creation and earning backlinks from other websites

on-page SEO

SEO

- ▶ Key words
 - ▶ strategically optimizing your content for certain keywords.
 - ▶ Example:
 - ▶ videos , photos, audio
 - ▶ describe them,
 - ▶ SE bots can understand and rank your pages using the keywords

SEO

▶ Keywords

- ▶ Have a high search volume
 - ▶ people are looking for the keywords
- ▶ Have low competition
 - ▶ smaller amount of results will mean your chances of ranking higher improve
- ▶ Are supported by your content
 - ▶ the keywords are relevant to your site

SEO

- ▶ Keyword tools
 - ▶ lots of tools
 - ▶ most popular is Google's Search-Based Keyword Tool
 - ▶ it can also give you a list of keyword ideas (account holder)

SEO

- ▶ The long tail
 - ▶ Chris Anderson made popular
 - ▶ of low traffic keywords can collectively send you more visitors than a few high-traffic keywords
 - ▶ Example:
 - ▶ DVD - high traffic keyword
 - ▶ A name of a DVD - low traffic
 - ▶ your long tail should make up roughly 80% of your traffic

keywords

Have a high search volume

- people are looking for the keywords

Have low competition

- your chances of ranking higher improve

Are supported by your content

- the keywords are relevant to your site

Key term use

- Key term in the title tag at least once.
- prominently near the top of the page.
- At least two or three times, including variations, in the body
- At least once in the alt attribute of an image on the page
- Once in the URL.
- At least once in the meta description tag

keywords

- strategically optimizing your content for certain keywords
- SE spiders/bots can understand and rank your pages using the keywords
- SEO fundamental approach - keyword research
- Many (expensive) tools
- Summary
 - Good keyword research = traffic = good ROI
 - Poor use of keywords = lower traffic = poor ROI

keyword research tools - Google

- Google Analytics
 - Data about site traffic
- Google Search Console
 - Data about your site traffic
- Google Search
 - Enter key term & top suggestions are given
- Google Trends
 - Compare keywords for traffic statistics
- Other include Keyword Planner, PageSpeed Insights, Mobile-friendly text

keyword research tools - other

- Ahrefs
 - Industry standard but very expensive, one or two free tools
- Ubersuggest
 - Limited free service, stats of visits & SEO difficulty
- Answer the public
 - good for questions to answer, <https://answerthepublic.com/>
- Yoast / RankMath
 - WordPress plugins

page SEO

- Search engine bots read your website's code
- Title tags
 - make sure keywords are in the title
 - At beginning is better
 - each page should have a unique title tag

Meta tags

- description (not too long)
- each page should have a unique meta description, e.g.

<meta name="description" content="Web design insights since 1995. Personal site of Jeffrey Zeldman, publisher of A List Apart Magazine, founder of Happy Cog Studios, co-founder of The Web Standards Project, co-founder of the Event Apart design conference, author of Designing With Web Standards." />

headings

- one H1 tag,
- relevant h2, h3, and h4
- headings contain relevant keywords to the content

sitemap

- HTML sitemaps
 - Good for indexing
 - Goof for visitor navigation
- XML sitemaps
 - use tools to automatically create an XML sitemap
 - submit it to Google and Bing

optimize

- Domain Name
 - top keywords in domain name rank higher
 - exact match domain names rank even higher
- URL structure
 - short
 - only use letters and numbers
 - not contain extraneous characters (\$ @ ! * % = ?)
 - dashes not underscores

optimize

Site structure

- how you link web pages together will make a big impact on your rankings.
- Links within your content tend to carry more weight than links within a sidebar or footer.
- try to keep the number of links on each page under 100.
- nofollow links (less relevant - omit from robots.txt)

off-page SEO

SEO

▶ Links

- ▶ Links are maybe the most important part of SEO.

- ▶ currently / future, yes /no ?

- ▶ see The Future of PageRank: 13 Experts on the Dwindling Value of the Link

- <http://www.wordstream.com/blog/ws/2014/02/25/pagerank>

- ▶ The more web sites that link to your web site,

- ▶ the higher your web pages will rank.

SEO

▶ Links

- ▶ Links within content are more effective
- ▶ Links from related sites are better
- ▶ Anchor text plays the most important role in link building.
- ▶ If you want to rank for “blue widget” then you want the anchor text of the link to be “blue widget”

SEO

▶ Links - avoid

- ▶ Links from spammy or irrelevant sites.
- ▶ Reciprocal links are not effective.
- ▶ If all of your links are rich in anchor text, it can hurt you.
- ▶ If you buy text links and get caught, you can get banned from a search engine.

SEO

- ▶ Links - increasing amount

- ▶ Directories

- ▶ Social media

- ▶ Top 100

- ▶ top 100 for a keyword link to your site (maybe not competitor)

- ▶ Dead links

- ▶ similar sites, email, add your link before die

- ▶ competition

- ▶ Roughly, 5% of the web sites you email will add your link.

linking

- Links are one of the most important parts of SEO
 - the more (trusted) web sites that link to your web site,
 - the higher your web pages will rank

linking

- Links within content are more effective
- Links from related sites are better
- Anchor text plays the most important role in link building.
- If you want to rank for “blue widget” then you want the anchor text of the link to be “blue widget”

Link building

- Directories
- Social media
- Get reviewed
- request
 - Roughly, 5% of the web sites you email will add your link
- find dead links
 - Offer your site as an alternative
 - similar sites, email, add your link

build for users

User intent

- **"Do"** Transactional Queries:
 - I want to do something, such as buy a plane ticket or listen to a song.
- **"Know"** Informational Queries:
 - I need information, such as the name of a band or the best restaurant in New York City.
- **"Go"** Navigation Queries:
 - I want to go to a particular place on the Internet, such as Facebook or the homepage of the NFL.

users

- Use search boxes
- Provide navigation, good menus and user-friendly links.
- Provide alt text for images
- Provide transcripts for video and audio content

Focus on

- **Titles** - Create good titles with keywords at the beginning
- **Keywords** -relevant keywords placed in title, H1, early content
- **Links** - Link to quality (relevant) sites, helps sites link to you
- **Quality** - Try to publish unique and quality content
- **Freshness** -add new content on a regular basis
- **Navigation** -make it easy for visitors to use your site (and look OK)
- **Design** -hero & top heading - grab the visitor
- **Site** -don't make it slow, no broken links, etc.

consider

Simple strategy

- Focus on optimizing for Google.
- Create long-form content over short-form when appropriate on your blog.
- If you service a local audience, experiment with local SEO and voice search.
- Use images, video, and other visuals to reach younger audiences and increase your search rank.

tips

- Long content - quality, 2000+ words
- Optimize for feature snippets - short answers to questions
- Monitor - use analytics

speed

- Bounce rates - increase by 9% for your website if it takes an additional 2 seconds to load and 38% if your site takes 5 seconds to load
- 53% of mobile website visitors will leave your site if it takes more than 3 seconds to load
- 68% of online experiences begin with a search engine
- 86% of people ignore paid banner ads, choosing to only click on organic search results

<https://inter-growth.co/seo-stats/>

design

- Users spend an average of 5.94 seconds looking at a website's main image
- Users spend an average of 5.59 seconds looking at a website's written content
- 94% of negative feedback about websites was about design.
- 94% of first impressions are design-related,
- users tend to spend 88% more time on a website with **audio-visual elements**
- Users tend to spend up to 88% more time on a website that has **videos**.

<https://userguiding.com/blog/website-statistics-trends/>

blogs

- 25% of all websites on the internet are blogs
- 16 blog posts per month vs 4 or less get 3.5x more visits
- More than three-quarters of the internet's individual visitors read blogs frequently

<https://userguiding.com/blog/website-statistics-trends/>

Final stats

- consumers now do as much as 70% of their purchasing research online
- first five organic results account for 67.6%
- average content about 1500 words
- The #1 result in Google has an average of 3.8x more backlinks than positions #2-#10
- More than 54% of search queries are at least 3 words long
- In 2021, 36% of SEO experts thought the headline/title tag was the most important SEO element
- 46% of all searches on Google are for a local business or local service
- ‘Best’ + ‘right now’ mobile queries have grown by over 125% in the last two years
- ‘Where to buy’ + ‘near me’ mobile queries have grown by over 200% in the past two years
- By 2025, nearly 73% of internet users will access the internet solely via mobile devices (from 58%)

References

- Kissmetrics (2010) SEO: A Comprehensive Guide for Beginners. Retrieved at: <https://blog.kissmetrics.com/seo-guide/> (Accessed 16/3/17)
- Moz (2016) The Beginners Guide to SEO. Retrieved at: <https://moz.com/beginners-guide-to-seo> (Accessed 22/3/17)

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Thank you!
any questions?