

Developing an SEO-Friendly Website

1.Components of on-site SEO

Onsite optimization is focused on internal factors, including ensuring your website pages, titles, tags, content and overall structure are optimized for your targets.

- Test
- Measure
- Refine
- Technology Stack
- Information Architecture
- URLs
- Site Structure

Optimization from the perspective of Google

Google is the market leader in SEO.

What does Google want:

- Quick answers
- Simplicity
- Accessibility
- Experience
- Context
- Transparency
- Authenticity
- Accuracy

Don't over-tune for web crawlers. Users should be your first priority.

2.Creating your Information Architecture:

Indexable content

Crawling and indexing are two ways, search engine interacts with your site.

Crawling is the act of finding a page on your website to analyze the content.

Indexing is the storage of that page and information related to it within the search engine's data base.

There can be visual difference between how your page looks in browser and how google see it through its headless browser. **Screaming frog/google search console** are good places to that difference because if google will not able to read that content, it would not be able to rank it.

Improving site indexability

Optimizing Nontext Element:

- Create alt text for all images.
- Supplement flash and interactive components with text.
- Provide a transcript for video and audio content.
- Make sure js and css files are not blocked from being crawled.
- Restrict pdfs or convert them to html as appropriate.

Test your site and crawl through it as google would do. Screaming frog is best for this purpose.

- Go to screaming frog seo spider and enter url of your site.
- In configuration settings, in basic, just check "check links outside of start folder", "crawl canonicals" and "extract hreflang"
- In configuration-->robots.txt, check "show internal URLs blocked by robots.txt". Never check "ignore robots.txt"
- Now go to google.com and enter site:url of your site and see how many results google shows and how many are pages of your website.

Crawlability

- Crawlability determines how likely google is to find the pages you want indexed.
- Crawlers don't like complicated, disorganized URLs.
- Google needs direct crawlable links.
- Google does set a crawl rate limit which dictates how many simultaneous connections they will use to crawl your site and how long they will wait before moving to a new page.
- A responsive site helps crawlability.

Robots.txt

Robots.txt is a simple file that tells the search engines how to crawl through your site. It should be in the root directory. You can disallow or allow the pages you want to be crawled by search engine.

Site Information architecture

A well-optimized site will have a thoughtful information architecture.

Keep your most prominent content no more than four clicks away.

Creating your site architecture

- In designing a web site, you should consider both
 1. **Taxonomy: The simple hierarchy of your site.**
 2. **Ontology: The complex relationship between concepts and taxonomies.**

HTTP vs. HTTPS

- Your site needs to move to HTTPS.
- Obtain and install a secure socket layer (SSL) certificate.
- It's a factor in ranking. Google prefers HTTPS sites.
- Your sitemap should be listed to all links to https.

Subdomains

- Subdomains should not be your 1st choice.
- Keep content within a standard directory, subdirectory structure.

Picking a domain name

How to choose a domain name.

- Make it brandable.
- Easily shareable
- Memorable
- Unique
- Make it pronounceable.
- Make it .com
- Make it legally sound.

- Use broad keywords.
- Make it adaptable
- Take the opportunity to get creative.

Site maps

A **site map** (or **sitemap**) is a list of pages of a web **site** within a domain.

There are two types of site maps. Html and xml. Html are for both users and crawlers but xml is only for crawlers.

To create a sitemap go to screaming frog SEO spider

- Go to sitemaps.
- Check the options, you want.
- It will simply create a sitemap for you and you can keep it in your root directory.
- Add that sitemap to search console and robot.txt file.

3.Managing your URLs

URL structure

Your site URL structure is not only important for user experience but also for search engines. Focus on URLs that are human readable and short.

Tips for creating URLs

- Rely on static URLs.
- Don't stuff keywords.
- Use only what is necessary.
- Utilize hyphens for separation.
- Maintain only one URL for each page.
- Simplify additive filtering and sorting parameters.

Canonical URLs

Unintentional content duplication is a common SEO issue. every site needs canonicalization. **It's a process for converting data that has more than one possible way of being represented into a standard and preferred format.**

- Define a canonical URL.

- Use 301 redirects wherever possible.
- Take care of all the parameters that are added in tracking for that do something like that for your URLs:
- `<link rel="canonical" href="https://www.example.com/blog">`

Pagination

Pagination can be a problem for google. Google does not crawl in an order. It can rank your page no 10 first.

Apply tags to let google know when it has encountered a sequence of paginated pages. in the head section of your first page, of your 6 pages paginated website, put this in head section, it will point to second page

```
<link rel="next" href="https://www.example.com/article-p2"/>
```

Then do same for second page and it will point to page 3 and so on.

And in the last page add the below code and, it will point to page 5 which is second last page.

```
<link rel="prev" href="https://www.example.com/article-p5"/>
```

Additional solution is "view all" page like this, put this code in head section of every page.

```
<head>
```

```
<meta name="robots" content="noindex, follow">
```

```
</head>
```

Make sure you must write "follow". It means that page authority will move to every page even though entire list is removed from index. Don't put it in robot.txt file because in that case google will not at all crawl through pages.

HTTP status codes

Http status code are of 3 digits, the first beginning with one of five numbers, 1 through 5.

100s—informational

200s—success

300s—redirection

400s---client error

500s—server error

You can see through screaming frog, all codes of your site.

Mobiles and desktop friendly

Google looks at the desktop version of your site to evaluate relevance for the user. Responsive websites are best solution.

4.Optimizing your content structure

Site tags

Title tag have direct impact on SEO ranking

- **Title:** (choose wisely), only use the keywords that are directly related to your page. Every page should have a unique tag. Keep it less than 50 characters.
- **Meta description:** it is like advertisement for browsers. Keep meta description to 10 characters or less. Use separate meta description for each page.
- **Heading:** must be displayed in sequential order.

Term frequency-Inverse Document frequency (TF-IDF)

TF-IDF is a numerical statistic that reflects how important a word is to a document within collection. e.g., how many times it appears in a page.

Ryte.com is a tool to check content success.

Image filenames and alt attributes

Filename and alt attributes are incredibly helpful in ranking. Names should be very specific and descriptive. It will help a lot in SEO ranking.

5.Introducing Structured Data

Structured data

Structured data makes your site eligible for inclusion in rich results. You can test your structured data through a google tool.

To manage structured data effectively:

- Define the content markup –describes the content itself, starting with high-level properties.
- Define the action markup- defines action properties, starting with required action for most content.
- You can insert the markup code to make your data structured.
- You can then test your data by “structured data testing tool”.

Structured data is an incredibly effective way to optimize your site.

Schema.org

Schema.org introduces all the vocabulary. e.g. you can go to schema.org/movie

6. Technical Makeup

Site Speed

Google has to fetch a lot of data and it prefers the pages which load instantaneously.

- Get the server to render in under 200 milliseconds.
- **Minimize** or eliminate redirects.
- Minimize the number of round trips for rendering the piece of content.
- Avoid any external-blocking JS and CSS above the fold.
- Reserve 200milliseconds for the browser layout and rendering.
- Optimize JS execution and rendering time.

JavaScript and the DOM

Each html element is DOM node.

Critical rendering path

The steps between receiving HTML, CSS, and JavaScript and rendering the page in your browser. optimizing the critical rendering path and allowing content to load progressively helps SEO. you can use google developer tool “**light house**” to visualize the rendering path.

Tips to optimize CSS:

- Put CSS in the document head.
- Avoid CSS imports.
- Inline render-blocking CSS.

Tips to optimize JS:

- Prefer asynchronous JavaScript resources.
- Defer parsing the JS.
- Avoid long-running JS.

HTTP/2

HTTP/2 allows multiple concurrent exchanges on the same connection.

Enable HTTP/2 support on your server or start with discussion with your development team.

Progressive web apps

Uses modern web capabilities to deliver an app-like user experience.

PWAs use new APIs and design concepts to create experiences that feel like native applications.

Key elements of PWA

- Progressive
- Responsive
- Independent
- App-like
- Fresh
- Safe
- Discoverable
- Reengageable
- Installable
- linkable

