Yggdrasil SEO documentation

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What is SEO (Search Engine Optimization)

SEO (Search Engine Optimization) is about making your website easier for **search engines** to understand and more appealing to **users** who are searching for related content. When SEO is used correctly it should help your site appear **near the top of search results, help people find your website more easily and increase traffic, trust, and visibility without paid ads.**

How does SEO (Search Engine Optimization) work

When you search for something on google ,google will crawl (read) your website using bots. It then indexes(store) the content it finds and ranks the results based on how relevant and trustworthy the content seems. SEO helps your site perform better at all 3 stages.

Key Elements of SEO

Title Tag – The text shown in the browser tab and Google result.

```html
<title>Yggdrasil</title>
```

Meta Description – A short summary shown under your title in search results.

```html
<meta name="description" content="Yggdrasil – Free Dungeons & Dragons (DnD) campaign, character, encounter, and adventure manager. Create and manage characters, campaigns, encounters, NPCs, quests, and more online for free. Try our free DnD character creator, encounter tracker, adventure builder, campaign organizer, and role-playing game tools today! Perfect for tabletop RPG players, dungeon masters, and fantasy role-playing enthusiasts.">
```

Keywords – Words or phrases people search for.

```html
<meta name="keywords" content="DnD, Dungeons & Dragons, RPG, tabletop RPG, free DnD tools, free RPG tools, campaign manager, character creator, character
```

```
sheet manager, encounter manager, adventure builder, quest tracker, NPC
manager, dungeon master tools, online DnD, free DnD platform, fantasy RPG
tools, role-playing game tools, campaign organizer, encounter tracker, free
character builder, online campaign creator, free adventure manager, RPG
management tools, DnD app, free DnD creator, online tabletop RPG, DnD campaign
planner, tabletop game manager, free RPG app, DnD online, free DnD sheet,
roleplay tools, free DnD manager">
```
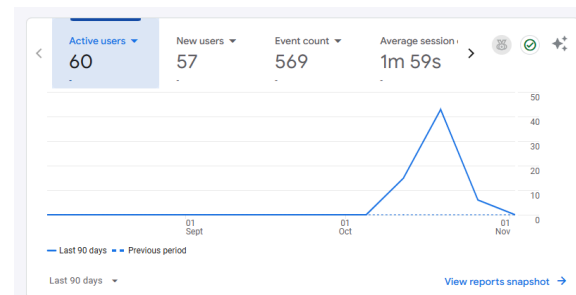
Conclusion

SEO is like **telling Google exactly what your website is about** and **making it fast and useful for visitors**. If your site has strong SEO it will be **easier to find** , **look trustworthy** and get **more interaction.**

Google analytics

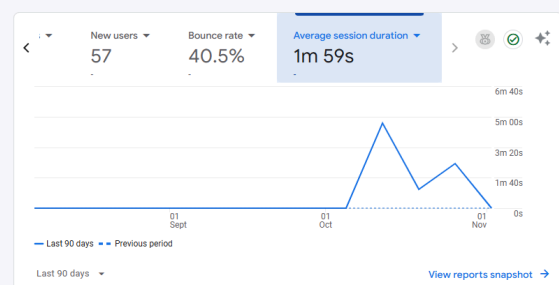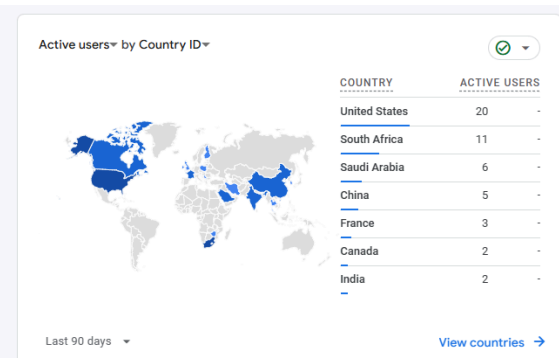| Over the last month I have collected data using google analytics here is the data I collected.	
Analytic images	**explained**
	Over the last month, my website received 60 users and recorded 569 events, indicating that while the user base is modest and some visitors are actively interacting with the site's features.

Over the last month I have collected data using google analytics here is the data I collected.
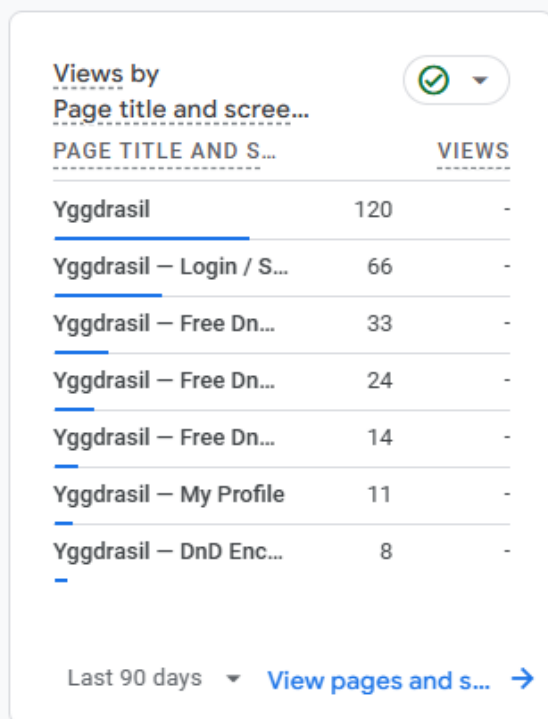
The most visited page is the Login/Signup page, followed by the Home page. This shows that users are primarily focused on accessing or creating accounts, while the Home page attracts visitors exploring the site's features before engaging further.

Users spend an average of 1m 59s session, with a bounce rate (**Bounce rate** is a metric in Google Analytics that measures the **percentage of visitors who leave your website after viewing only one page**, without interacting further.) of 40.5%, showing engagement with the content.

Of the 60 users who visited the website over the past 27 days, the majority are from the United States (20 users), followed by South Africa (11 users). Interestingly, while the United States accounts for the largest

Over the last month I have collected data using google analytics here is the data I collected.
	share of visitors, the highest engagement and interaction with site features come from users in South Africa. This suggests that although the US brings more traffic, South African users are more actively exploring and utilizing the tools on the site, indicating a highly engaged user base in that region. Tracking this behavior can help tailor content and features to encourage engagement across all regions.

Google Index

My website is fully indexed by Google and optimized for search engines. In the **index.html**, I included a meta description and keywords specifically targeting Dungeons & Dragons and tabletop RPG audiences. The **robots** meta tag (**index, follow**) ensures search engines crawl and index all pages.

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

On the Home page, I implemented dynamic SEO tags using a custom React hook (**useSEO**) to update the page title, description, keywords, canonical URL, and JSON-LD structured data. The canonical URL (**https://andredv.xyz/**) prevents duplicate content issues, and the JSON-LD markup allows search engines to understand the website as a complete online RPG management platform. These measures improve discoverability, ensure correct indexing, and enhance the chances of appearing in search results for relevant queries.

```
 useSEO({
   title: 'Yggdrasil — Free DnD Campaign, Character & Encounter Manager',
   description: 'Manage Dungeons & Dragons campaigns, characters, encounters, quests, and
more online for free with Yggdrasil. Perfect for tabletop RPG players and dungeon masters.',
   keywords: 'DnD, Dungeons & Dragons, RPG, tabletop RPG, campaign manager, character
creator, encounter tracker, adventure builder, NPC manager, free DnD tools, online DnD,
role-playing game tools, free RPG platform, fantasy RPG tools',
   canonical: 'https://andredv.xyz/',
   jsonLd: {
 "@context": "https://schema.org",
 "@type": "WebSite",
 "name": "Yggdrasil",
 "url": "https://andredv.xyz/"
}
 });
```

This is my **useSEO** it is a **custom React hook** that dynamically manages SEO-related

elements on your website. It updates the **page title**, **meta description**, **keywords**,

canonical URL and **JSON-LD structured data** whenever the page changes. The helper

functions **setOrUpdateMeta** and **setCanonical** ensure that meta tags and the canonical link

are either created or updated in the **<head>** of the document. The JSON-LD script allows

search engines to understand the website as a structured entity (like a WebSite or Article),

which can improve indexing and display in search results. Essentially, this hook automates

SEO for each page in your React app.

```javascript
// src/hooks/useSEO.js
import { useEffect } from 'react';

function setOrUpdateMeta(selector, attrs) {
  let el = document.head.querySelector(selector);
  if (!el) {
    el = document.createElement('meta');
    Object.keys(attrs).forEach(key => el.setAttribute(key, attrs[key]));
    document.head.appendChild(el);
  } else {
```

```javascript
    Object.entries(attrs).forEach(([k, v]) => el.setAttribute(k, v));
  }
}

function setCanonical(href) {
  if (!href) return;
  let link = document.head.querySelector('link[rel="canonical"]');
  if (!link) {
    link = document.createElement('link');
    link.setAttribute('rel', 'canonical');
    document.head.appendChild(link);
  }
  link.setAttribute('href', href);
}

export function useSEO({ title, description, keywords, canonical, jsonLd }) {
  useEffect(() => {
    // Update document title
    if (title) document.title = title;

    // Update meta tags
    if (description) setOrUpdateMeta('meta[name="description"]', { name:
'description', content: description });
    if (keywords) setOrUpdateMeta('meta[name="keywords"]', { name: 'keywords',
content: keywords });
    if (canonical) setCanonical(canonical);

    // Update JSON-LD structured data
    const id = 'ld-json-primary';
    let script = document.getElementById(id);

    if (jsonLd) {
      if (!script) {
        script = document.createElement('script');
        script.type = 'application/ld+json';
        script.id = id;
        document.head.appendChild(script);
      }
      script.textContent = JSON.stringify(jsonLd, null, 2);
    } else if (script) {
      script.remove();
    }
```

```
    // Optional cleanup if needed
    return () => {
        // We generally leave meta tags for SEO, but you could remove JSON-LD if
desired:
        // if (script) script.remove();
    };
  }, [title, description, keywords, canonical, jsonLd]);
}
```

Keywords, Meta Tags, and Indexing

Keywords used:

For the website I used keywords that directly target the audience of tabletop RPG and Dungeons & Dragons (DnD) players. Examples include: *DnD, Dungeons & Dragons, RPG, tabletop RPG, campaign manager, character creator, encounter tracker, adventure builder*. They are chosen because they reflect the most common search terms that users might use when looking for free online tools to manage DnD campaigns. By targeting these keywords, the website is more likely to appear in relevant search results and attract engaged users who are actively looking for RPG management solutions.

```
keywords: 'DnD, Dungeons & Dragons, RPG, tabletop RPG, campaign manager,
character creator, encounter tracker, adventure builder, NPC manager, free DnD
tools, online DnD, role-playing game tools, free RPG platform, fantasy RPG
tools',
```

Meta Tags, Titles, and Descriptions:

The website uses descriptive and targeted meta tags to improve search visibility and give the user a clear understanding of what the website is:

Title Tag: title that clearly communicates the purpose of the website to both users and search engines.

```
title: "Yggdrasil — DnD Encounter Manager",
```

Meta Description: The description provides a concise summary of the web page functionality. Highlighting features such as campaign management, character creation, encounter tracking, and adventure building. This helps users understand what the site offers directly from the search results.

```
description: "Create and manage Dungeons & Dragons encounters online for free.
Track encounters, manage NPCs, and organize your campaigns with Yggdrasil, the
free DnD adventure and character manager.",
```

Robots Tag: ensures that all pages are indexed and followed by search engines, maximizing discoverability.

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

Additionally, I implemented a **custom React hook (useSEO)** that dynamically updates the page's title, meta description, keywords, canonical URL, and JSON-LD structured data. This ensures each page is optimized for SEO automatically, prevents duplicate content issues, and allows search engines to understand the website as a structured platform.

Insights and Correlations

Based on the data collected through **Google Analytics** some of the major insights we got are from examining geographic data where most users originate from the **United States**, followed by **South Africa**. But if you look at the comparison of the data we can see that the US users have an average session duration of 1s and the average session duration of SA is 5m 27s. Due to this data it is likely that U.S. users' searches are more related to

"Yggdrasil" in the context of Norse mythology since the name is widely recognized as the "world tree" from Norse legends.

		Active users	New users	Engaged sessions	Engagement rate	Engaged sessions per active user	Average engagement time per active user
	Total	63 100% of total	60 100% of total	56 100% of total	61.54% Avg 0%	0.89 Avg 0%	1m 16s Avg 0%
1	United States	20 (31.75%)	19 (31.67%)	10 (17.86%)	50%	0.50	1s
2	South Africa	14 (22.22%)	14 (23.33%)	30 (53.57%)	75%	2.14	5m 27s

This suggests a clear distinction between **search intent** and **user purpose**. Visitors from the U.S. may have found the site through mythological or unrelated keyword searches, while South African visitors represent the actual **target audience**. People using the platform for tabletop RPG and Dungeons & Dragons content. Overall the data indicates that Yggdrasil's SEO is beginning to attract attention but may still need refinement to improve keyword targeting.

Conclusion

Through the development and deployment of Yggdrasil I have gained a deeper understanding of how search optimization and analytics contribute to a website's visibility, performance, and user engagement. I have learned that by visibility, performance, and user engagement through a custom React hook it helps ensure that each page was optimised for indexing and discoverability.

The insights gathered from Google Analytics revealed important patterns in user behavior and search intent. This helped us understand why users from the United States may be more but have less engagement rates than South African users.

Overall in this project I learned that SEO is not just about technical tags or ranking but it is about understanding how users find and interact with your content. Combining

well-structured metadata, keyword relevance, and analytical insights provides a strong foundation for improving visibility and shaping future growth for Yggdrasil's online presence.