

DAB402-23W-001 CAPSTONE PROJECT Winter 2023 - 001

Search Engine Optimzation Plan for WerRV

Assessment - 1

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Problem Statement:

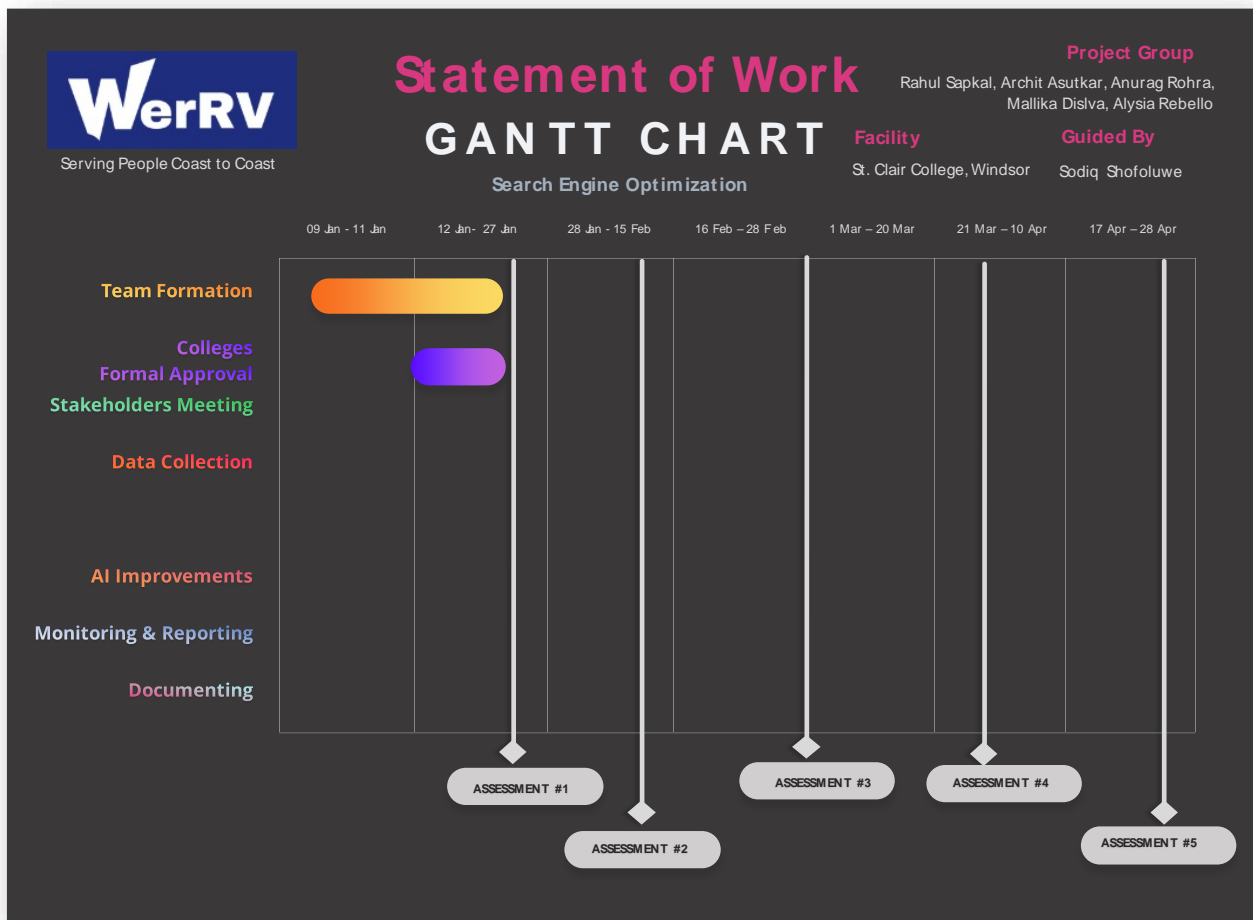
The project plan would be to help us (<https://werrv.ca/>) improve the Search Rankings for many of our 30,000 products.

For a Web site to stand a decent chance of being successful, specific marketing tactics must be used both internally and outside. A successful website is one that ranks highly in the online directories. Internal marketing measures known as search engine optimization (SEO) can assist a website in rising in the search engine results pages. Internet search engines, like Google, Yahoo, Bing and MSN, are directories that look for Web pages based on the relevancy of the keywords or key phrases used to locate them.

Importance:

Due to increased competition, website owners are now equally concerned with keeping a high rank once they have achieved it as they are with how popular their websites rank. These objectives can be attained by using ethical (white hat) search engine optimization techniques while creating and maintaining a website.

Our Primary Objective is to develop a platform for an e-commerce company which is efficient and cost effective for various product/service to improve SEO of the WerRV, as the company offers us with wide variety of parts and accessories for Boats, RV's, 5th Wheels, Campers and Trailers. We also stock a supply of products for outdoor and watersport enthusiasts.



Pathway:

The project has four main Parts:

Part 1: Data Collection

We are going to extract keywords from WerRV website and SERP research would be through dataforseo with few API. Moreover, in order to improve WerRV's search engine rankings we can do keyword research, competitor analysis, and tracking website traffic and engagement metrics.

Part 2: Analyze

- Keyword research: Using tools like Google Keyword Planner or SEMrush to identify the keywords and phrases that are relevant to the website's content and that potential customers are searching for.
- Competitor analysis: Researching websites that are ranking well for the same keywords and phrases and identify what they are doing differently.

- On-page optimization: Ensure that the website's title tags, meta descriptions, and header tags are optimized for the target keywords, and that the content is high-quality and includes those keywords in a natural way.
- Technical SEO: Check the website's structure, load time, and mobile responsiveness to ensure that it is technically sound and that search engines can easily crawl and index its content.
- Backlink analysis: Checking the quality and quantity of backlinks pointing to the website. Backlinks can impact website ranking on SERP.
- Track progress: Using tools like Google Analytics to track the website's traffic, bounce rate, and conversion rate, and use this information to make data-driven decisions about what changes to make in order to improve the website's search engine visibility.

Part 3: AI Improvements

- Content creation: GPT-3 can be used to generate high-quality, keyword-optimized content for the website, which can help to improve its search engine visibility. This can include things like blog posts, product descriptions, and meta descriptions.
- Chatbots: GPT-3 can be used to create chatbots for the website, which can help to improve user engagement and provide a better overall user experience. This can also improve the website's ranking on SERP.
- Language Translation: GPT-3 can be used to translate the website's content into different languages, making it more accessible to a global audience and improving its search engine visibility in non-English-speaking countries.

Part 4: Operationalizing and Handover for Ongoing Use

- Documenting processes: Create detailed documentation of the SEO improvement processes that have been implemented, including the tools and techniques used, the data that was analyzed, and the changes that were made to the website. This documentation should be clear, detailed, and easy to follow for anyone who needs to continue working on the website's SEO in the future.
- Monitoring and reporting: Setting up a system for monitoring the website's search engine rankings, traffic, and engagement metrics, and for reporting on the progress of the SEO improvement efforts. This can include using tools like Google Analytics, SEMrush and Ahrefs to track the website's performance.

Technologies & Tools Used:

- API – SERP using dataforseo.com - An application programming interface (API) is a way for two or more computer programs to communicate with each other. SERP stands for "Search Engine Results Page." It is the page that is displayed by a search engine in response to a user's query. The SERP typically includes a list of links to webpages that the search engine considers relevant and authoritative for the user's query.

- Web-Scrapping - Scraping data from web page, fetching it and extracting useful data from it.
- Python, Anaconda - To create and manage data structures, creating model to get desired results.
- Data Studio, Tableau, Excel - The market-leading choice for modern business intelligence, these analytics platforms makes it easier for stakeholders to explore and manage data, and faster to discover and share insights that can change business plans accordingly.
- ChatGPT - This can analyze werrv's SEO and provide suggestions for improvement. This can include identifying technical issues that may be impacting werrv's search engine visibility. It can help generate werrv's meta tags, such as meta title and meta description, that are optimized for search engines and can help increase the visibility of werrv's website.

Comparison Analysis:

In comparison to the previous project, the website werrv.ca currently has 38,000 products available, as opposed to the 30,000 listed before. It is crucial to improve SEO for 8,000 more products are added, since products are constantly being added to the inventory. Additionally, with many changes and updates to search engine algorithms, it is important to stay up-to-date with the latest best practices in order to have the most effective SEO solution."

Overall, an updated SEO solution can be an effective way to improve a website's visibility and traffic. However, it is important to have a clear understanding of the specific goals and target audience, as well as to stay up-to-date with the latest best practices and changes in search engine algorithms.

Approach for Solution:

Initially, BeautifulSoup can be used for web scraping, which involves extracting data from websites. While it can be used to gather data that can be used to improve SEO, it is not a direct solution for SEO improvement.

1. Machine learning: Python libraries such as scikit-learn and TensorFlow can be used to analyze large amounts of data to identify patterns and make predictions about how changes to a website might affect its SEO.
2. Keyword research: Python libraries such as pandas and NumPy can be used to analyze data on search volume and competition for various keywords, which can help inform WerRV's website content strategy and meta tags.

3. Automation: Here, python can be use to automate repetitive tasks such as creating sitemaps and submitting them to search engines, tracking website performance and publishing content to social media profiles.

Ethical Concerns:

In order to ensure the proper implementation of the 5 'C of data ethical techniques, all team members will be required to formally authorize Werrv.ca by signing all necessary papers and agreements, this will ensure that all team members are on the same page and committed to the successful execution of the project.

Impact On Stakeholders:

In the Digital era businesses must implement well-thought-out marketing strategies to reach their target audience. SEO is the process used to optimize a website's technical configuration, content relevance, and link popularity so its pages can become easily findable, more relevant, and popular towards user search queries, and as a consequence, search engines rank them better.

- **The Company (WerRV):** This project will help WerRV to reach the more people see their website, the more your online traffic increases, and better the chances will be to provide their product and service to a greater number of people which ultimately results to increase in profit of company.
- **Group Members:** This project will give hands-on real time industrial experience to the group members kick start career in the world of Data Science.

Data Sources:

- Data P
- rovided by WerRV Inc.
- Using dataforseo.com
- Product data from Werrv's online store website
- Ethical Product data from other competitors.
- Internet search engines, like Google, Yahoo, and MSN.
- ChatGPT.

References:

- <https://werrv.ca/>
- <https://dataforseo.com/>
- <https://www.google.com/>
- https://www.researchgate.net/publication/220497253_The_Core_Aspects_of_Search_Engine_Optimisation_Necessary_to_Move_up_the_Ranking