

# A Novel Method for Ranking a Website Rating via Search Engine Optimization

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## ABSTRACT

Everyone uses the internet and a search engine (SE) to find what they need, making SE indispensable. Search engines are used to find any sort of information, which is why most companies want to rank well on SE result pages in order to reach their ideal clients. Without a website, companies nowadays have little chance of competing in the industry. As a consequence, the companies have prioritized and funded efforts to improve their website SE rankings. There are a plethora of methods that may be used to optimize a website for search engines. These methods come under a heading, namely, search engine optimization (SEO) by webmasters. In this research, we propose a methodology that combines on-page and off-page SEO strategies to improve user search and website ranking over SE. The proposed method outperforms in terms of website ranking, whereby a website ranking is improved from fifth to second position on Google SE. This significant shift illustrates that on and off page SEO can work together to boost a website visibility over SE result page.

## KEYWORDS

Off page optimization, On page optimization, SEO, Backlink creation, Food panda

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## INTRODUCTION

Millions of Web pages are available on the Internet. A user can find relevant web pages over the Internet via a search engine (SE), for instance, Google. This is made possible by writing keywords (that represent user needs) into the search bar of SE. Search engine optimization (SEO) is the practice of implementing changes to a website in order to improve its visibility in search engine (SE) results. These changes may include modifying the website architecture, and content. This follows that SEO is primarily concerned with making a website and its contents easily accessible to users. The evolution of SEO tools is a gradual process, not something that happens overnight.

There are two distinct categories of SEO methods: white-hat SEO and black-hat SEO [1]. The white hat SEO provides results that are of high quality and last for an extended period of time. On the other hand, using methods that are considered to be black hat SEO might provide immediate results, but such results may not last for very long. In reality, black hat SEO employs unethical practices in order to rank the website. A penalty will be levied on the website by the SE in the event that black hat methods are discovered by the SE. This paper will give an introduction to white hat SEO and its methods. Furthermore, an SEO methodology including off-page optimization and on-page optimization is proposed to improve the ranking of a targeted website on a SE [2].

## LITERATURE REVIEW

Authors in [3] tried to increase traffic, especially for journal websites using white-hat SEO. The study focuses on journals where SEO is not applied before and uses SEO strategies such as keyword-based optimization in the paper title, meta tag, and in paper content. The study appeared to be effectively helpful in finding scholarly journals. A similar approach for SEO is adopted in [4]. Four SEO strategies namely, keyword-based, content-based, backlinks-based, and web pages directory-based optimization are applied in the website management system. These strategies shoes improvements in website position on SE result page. In [5], the authors tried to increase the site visibility of Umah Multi webiste, whereby SEO is never implemented before. The on page and off page SEO is employed for Umah Multi website. A comparative analysis of both SEO strategies showed that the on page SEO is more effective in achieving the highest index on SE for website than the off page SEO.

Another vein of SEO is discussed in [6], whereby SEO can be used to increase the loading speed of a website or simple content. The authors argued that webpage load speed is critical for Google SE ranking. The study showed that by using SEO strategies including Code optimization, formatting optimization, and comment optimization, website masters can significantly improve the loading speed of website which directly affects the position of website on Google result page. Authors in [7] discussed issues, case



studies, and possible SEO solutions. They have utilized different SEO strategies to analyze the ranking position of a consultancy website. The keyword optimization, Facebook optimization, user and session optimization, and referrals optimization strategies are implemented. The highest ranking (i.e., 98%) is achieved using user and sessions SEO technique.

Previous literature has applied SEO techniques in an effort to optimize the visibility of sites and content over SE

such as Google and Yahoo. However, existing SEO techniques lack combining of on page and off page white hat SEO strategies.

**PROPOSED METHODOLOGY**

The proposed SEO methodology combines two SEO approaches, namely, on-page optimization and off-page for maximum efficacy. Figure 1 shows all the distinct stages that are followed in the proposed methodology.

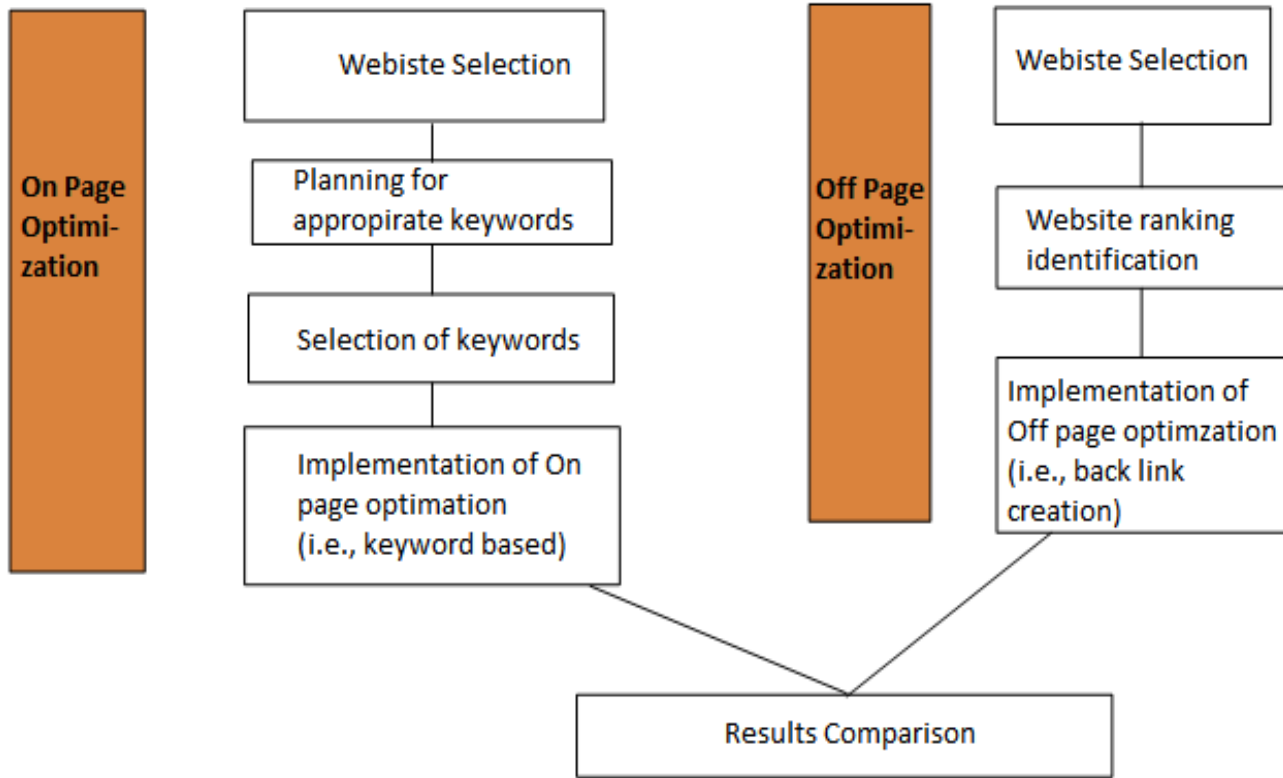


Figure 1 . Proposed SEO methodology

**ON PAGE OPTIMIZATION**

Our methodology begins with on-page optimization. At this stage, the user has full access to the website and can make any necessary changes to the Web page including the placement of keywords in the title tag, meta tags, internal links, and other metadata. As the results of a SE reveal the connection between websites and keyword phrases, the On-page SEO relies heavily on the keywords [8]. The on-page optimization procedure is outlined in detail in the next subsections.

**Website Selection**

In this study, we have selected the website www.foodpanda.com in an effort to improve its ranking via the proposed SEO methodology.

**Planning for Appropriate Keywords**

Planning and selecting appropriate keywords is crucial for on-page optimization [8]. Keywords are phrases that people use to find your company, services, product, or website online. Planning your keywords in advance allows you to take advantage of the phrases people actually type into search engines when looking for your product or service.

We have utilized Google's keyword planner for this purpose [9]. However, to use Google Keyword Planner we have created a Google AdWords account. This is the premier resource for discovering relevant new terms. After entering the selected website URL on Google Planner, we obtained a list of keywords as shown in Figure 2.

The screenshot shows the Google Keyword Planner interface with a list of keywords. The table below represents the data shown in the image.

<input type="checkbox"/> Keyword (by relevance)	Avg. monthly searches	Competition	Ad impression share	Top of page bid (low range)	Top of page bid (high range)
<input type="checkbox"/> www foodpand...	100 - 1K	Low	—	Rs51	Rs94
<input type="checkbox"/> food panda pak...	10K - 100K	Medium	—	Rs7	Rs30
<input type="checkbox"/> panda food	100 - 1K	Low	—	Rs11	Rs104
<input type="checkbox"/> panda delivery	10 - 100	Low	—	Rs6	Rs95
<input type="checkbox"/> foodpanda kara...	1K - 10K	Low	—	Rs32	Rs114
<input type="checkbox"/> food panda del...	100 - 1K	Medium	—	Rs7	Rs33
<input type="checkbox"/> food delivery	100 - 1K	Medium	—	Rs11	Rs129
<input type="checkbox"/> order food online	100 - 1K	Medium	—	Rs30	Rs242
<input type="checkbox"/> breakfast deliv...	10 - 100	—	—	—	—
<input type="checkbox"/> online food	100 - 1K	Medium	—	Rs10	Rs157
<input type="checkbox"/> online food dell...	100 - 1K	Medium	—	Rs29	Rs213
<input type="checkbox"/> order food onli...	10 - 100	Low	—	Rs18	Rs182

Figure 2. List of keywords via Google keyword planner

### Selection of Keywords

The Foodpanda pak, Foodpanda, food delivery, and panda food are among a few of the keywords that we have selected as appropriate for inclusion on the target website. The reason for this is that the Google results page results display the most relevant results with these selected terms.

### Implementation of on-Page Optimization

The proposed approach used on-page optimization strategy to raise the targeted website profile over the search engines. It is important to note that On-Page optimization involves modifying your website source code. Thus, you need to have admin access to the target website and be willing to add new keywords.

The off-page optimization (the second part of the proposed SEO) methodology, is something we can get better work on and is explained in the following section.

### OFF-PAGE OPTIMIZATION

Our second approach is off-site optimization, or SEO, which involves taking certain measures outside of a website to improve its SE rankings. The approach consists of three main steps.

#### Website Selection

The www.foodpanda.pk domain is used as the basis for the off-page SEO strategy. Foodpanda.pk is a website where you can place an order for food delivery. After making an order, the client is greeted by a delivery person with a

variety of culinary products. We hope that a Google search for "food panda" would provide the most relevant results. Food Panda's main website should be among the top results on the first page of Google.

#### Website Ranking Identification

Measurements of the website's (i.e., food panda.pk) present state are necessary to identify its ranking over SE before adopting the SEO methodology to improve the rank of the website. The same measurements are needed after the implementation of the proposed methodology.

#### Implementation of off-Page Optimization

The target website ranking is greatly improved because of the implementation of off-page optimization approach. The improved ranking has made it easier for users to find what they are looking for. Off-page SEO optimization come in many forms to boost a site's visibility. Our methodology makes use of the following hand-picked methods during off-page optimization.

1. The use of a device to create backlinks.
2. Leaving a comment.
3. Listings in directories
4. Social networking

#### Back link creation

Building quality inbound links is the lifeblood of off-page SEO [10]. There are several options for creating backlinks to your website on the market, for instance, some give a list of automated sites (that may not be reliable), while some

provide beneficial sites that will really link back to yours. One of the beneficial sites is SEO Profiler [11], which provides a number of useful functions. With the use of an SEO profiler, various discussion boards and websites are chosen for the purpose of building backlinks for the keyword "foodpanda" and the domain name "www.foodpanda.pk,"

increasing the likelihood that consumers would visit the foodpanda website. For instance, Figure 3 shows there are 813 trustworthy places where you can create backlinks to your website. Thus, by using an SEO profiler, we can attract more users to our website.

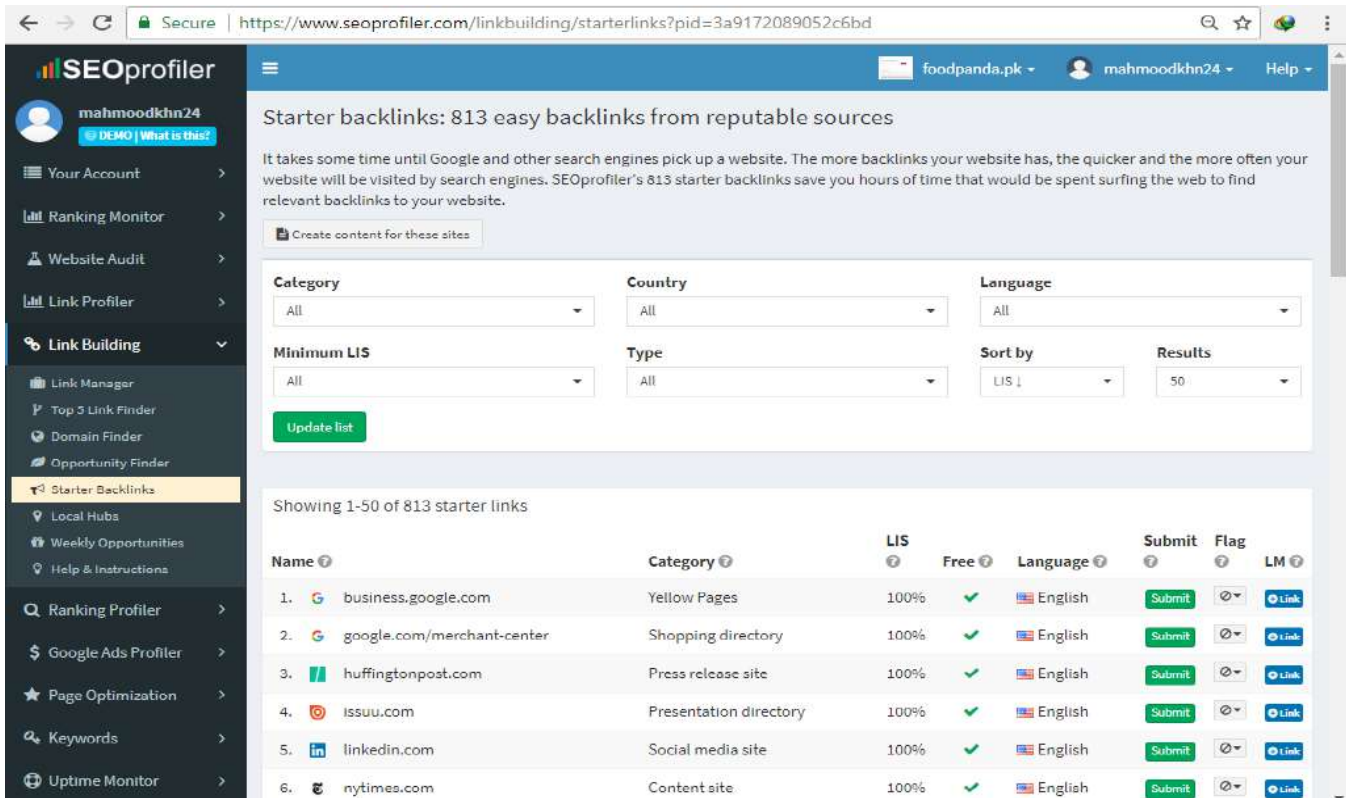


Figure 3. SEO profiler view for Back link creation

**Leaving a Comment:**

We have joined a variety of discussion forums, then posts a remark in a thread (including the thread's introduction and the targeted website's URL). The back links against the remark are created automatically by certain discussion boards or websites. Figure 4 demonstrates this functionality on techjuice website.

**Listing in Directory**

Submitting a website to directories is a procedure that allows it to be included in relevant databases or directories (e.g., SEO directory). If you want to get the most out of submitting your website to a directory, you should make sure it is included in the appropriate subcategory. When submitting a website to a directory, it is customary to provide a brief description, as well as a link to the site, in addition to choosing a relevant category. Given the nature of our site, we will, for instance, choose the "food" category. Listing in a directory is a lot like looking up a number in a phone book.

Google ranks websites higher if they are in relevant directories.

**Social media networking**

This is yet another method we may use to lure more visitors to our site. Facebook has one of the biggest user bases of any social networking site. Websites like www.foodpanda.pk may improve their search engine rankings by encouraging people to click over from the many Facebook groups where they are members.

**RESULTS AND FINDINGS**

Section 2 offered an SEO methodology, and on the basis of this, we have tried to boost the ranking of our intended domain www.foodpanda.pk.

The tools that were used to determine how well a website performed in terms of off-page SEO include (1) Alexa to determine a site's popularity in Pakistan, (2) Majestic to analyze inbound links, and (3) Google to see search engine results. The following sections represent the findings after using SEO methods.

**Improvement in Alexa Rank**

Figure 5 shows the rise in Alexa ranking from 814 to 523. This demonstrates that the target website is climbing the ranks higher.



Figure 4. Commenting on techjuice site

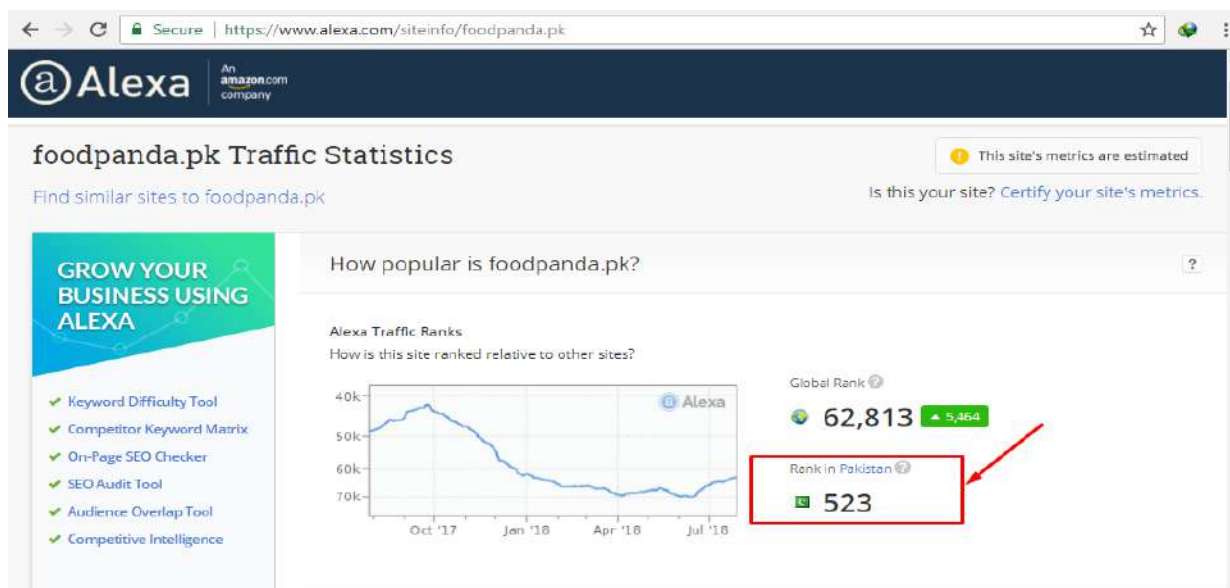


Figure 5. Alexa Rank

**Improvement in Backlinks**

Backlinks are one of the primary factors that contribute to an increase in traffic to a certain website. It is

confirmed by Majestic [12] that the number of backlinks to the target website has also increased (see Figure 6). This indicates that the traffic or the number of visitors to our

website has increased, which, in turn, has led to an increase in the higher rank of the targeted website.

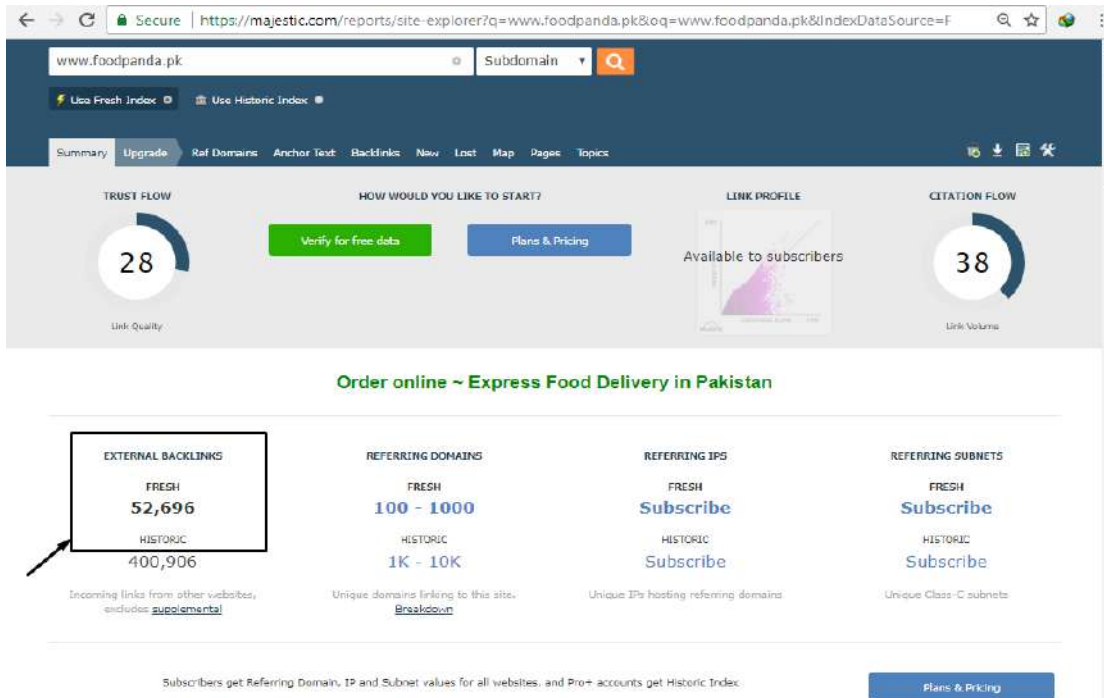


Figure 6. Back links ratio

**Improvement in Google Result List**

Through the use of a variety of SEO strategies, the primary purpose of this investigation is to improve the ranking of our website inside the list of results provided by

Google's search engine. According to the data shown in Figure 7, the position of our targeted website in Google has improved from fifth to first place.

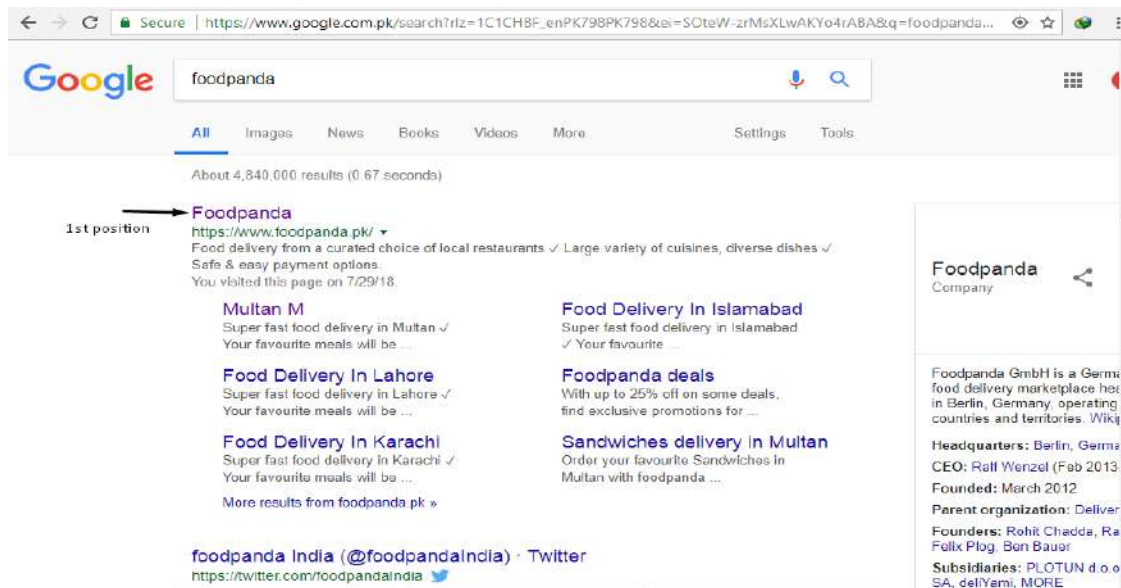


Figure 7. Google Result

Table 1 compiles all of the findings, allowing us to determine the extent to which our investigation for the target website (i.e., foodpanda.pk) was effective with a quick look

at the table. On February 9, 2023, report number 2 was completed.

Table 1. Findings summary for the target website

Investigation after SEO			Date. 09-Feb-2023		
Rank	Alexa	Traffic/Audience %	Majestic Back Links	Count	Google Result
	523	93.2%	52,696		1st

**CONCLUSION:**

The SE is now the most effective and really valuable instrument for searching purposes. The Google search engine is by far the most effective. SEO is a necessary component for websites in order to improve their position on the result lists generated by search engines. To achieve the highest position inside SE, specialists use a variety of strategies to maximize the performance of their websites. The white-hat SEO refers to the practice of using SE optimization strategies that are considered more ethical. On-page optimization and off-page optimization are the two methods that make up white hat SEO. Both of these methods are essential to reaching desirable outcomes. This research work presents an SEO methodology that implements On-page optimization and off-page optimization because these methods are user-friendly, and also cater to the needs of search engines. The experiment is carried out over the target website, which is www.foodpanda.pk. After assessing the website rank using Alexa rank, backlinks count using the Majestic tool, and Google result rank, it can be concluded that the proposed SEO methodology enhances the performance of the website over SE. The future work includes the construction of a new website in order to apply all of the SEO strategies more comprehensively.

**CREDIT AUTHOR STATEMENT**

**Muhammad Ahsan Raza:** Conceptualization, Software, Supervision. **Binish Raza.:** Data curation, Visualization, Software, Validation. **Mahmood Ashraf:** Methodology, Investigation. **Sehrish Raza:** Writing-Reviewing and Editing.

**COMPLIANCE WITH ETHICAL STANDARDS**

It is declare that all authors don't have any conflict of interest. Furthermore, informed consent was obtained from all individual participants included in the study.

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