

# Customer Care Mining with SEO of SEMRUSH and AHREF

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**Abstract**— This paper is based on the SEO approach for customer care data mining of the IT companies, Government Organization, Banks, Private companies. Through this website the people can access the information regarding the particular company such as services provided by that company, Head Office, Email ID, Official Website, and Location wise branch address all over India. From this website everyone can get the complete details about various sector of organization in a single roof. No need of searching various websites on the internet. Many websites are providing the information about the either IT companies, Government Organization, Banks, Private companies. But in this website we are providing all these sector companies information and the actual information accurately.

## I. INTRODUCTION

Search Engine Optimization <sup>1</sup>(SEO) is the activity of optimizing web pages or whole sites in order to make them search engine friendly, thus getting higher positions in search results. This tutorial explains simple SEO techniques to improve the visibility of your web pages for different search engines, especially for Google, Yahoo, and Bing. SEO stands for Search Engine Optimization. SEO is all about optimizing a website for search engines. SEO is a technique for:

- Designing and developing a website to rank well in search engine results.
- Improving the volume and quality of traffic to a website from search engines.
- Marketing by understanding how search algorithms work, and what human visitors might search.

SEO is a subset of search engine marketing. SEO is also referred as SEO copywriting, because most of the techniques that are used to promote sites in search engines, deal with text. If you plan to do some basic SEO, it is essential that you understand how search engines work.

### A. How Search Engine Works?

Search engines perform several activities in order to deliver search results.

- Crawling - Process of fetching all the web pages linked to a website. This task is performed by software, called a crawler or a spider (or Googlebot, in case of Google).
- Indexing - Process of creating index for all the fetched web pages and keeping them into a giant database from where it can later be retrieved. Essentially, the process of indexing is identifying the words and expressions that best describe the page and assigning the page to particular keywords.
- Processing - When a search request comes, the search engine processes it, i.e. it compares the search string in the search request with the indexed pages in the database.

- Calculating Relevancy - It is likely that more than one page contains the search string, so the search engine starts calculating the relevancy of each of the pages in its index to the search string.

- Retrieving Results - The last step in search engine activities is retrieving the best matched results. Basically, it is nothing more than simply displaying them in the browser. Search engines such as Google and Yahoo! often update their relevancy algorithm dozens of times per month. When you see changes in your rankings it is due to an algorithmic shift or something else outside of your control. Although the basic principle of operation of all search engines is the same, the minor differences between their relevancy algorithms lead to major changes in results relevancy.

### B. <sup>2</sup>What is SEO Copywriting?

SEO Copywriting is the technique of writing viewable text on a web page in such a way that it reads well for the surfer, and also targets specific search terms. Its purpose is to rank highly in the search engines for the targeted search terms. Along with viewable text, SEO copywriting usually optimizes other on-page elements for the targeted search terms. These include the Title, Description, Keywords tags, headings, and alternative text. The idea behind SEO copywriting is that search engines want genuine content pages and not additional pages often called "doorway pages" that are created for the sole purpose of achieving high rankings.

### C. What is Search Engine Rank?

When you search any keyword using a search engine, it displays thousands of results found in its database. A page ranking is measured by the position of web pages displayed in the search engine results. If a search engine is putting your web page on the first position, then your web page rank will be number 1 and it will be assumed as the page with the highest rank. SEO is the process of designing and developing a website to attain a high rank in search engine results.

### D. <sup>3</sup>What is On-Page and Off-page SEO?

Conceptually, there are two ways of optimization:

- On-Page SEO - It includes providing good content, good keywords selection, putting keywords on correct places, giving appropriate title to every page, etc.
- Off-Page SEO - It includes link building, increasing link popularity by submitting open directories, search engines, link exchange, etc.

## II. ABOUT CONTENT WRITING:

Content basically includes what you see on the site: the text, graphics, and even links to other websites. You should not use excessive graphics because they are not Search Engine Friendly plus heavy graphics normally put the users out when they get downloaded, especially over a slow network. Thousands of articles, books, and forum entries are available on how to make your website search engine friendly, but ultimately, one rule stands above the rest: Unique, high-quality, unduplicated content is the king. Superior the

quality of your content, the higher the ranking you achieve, larger the traffic you gain and greater the popularity of your website. Search engines prefer good quality sites in their index and search results. Relevant, fresh, and timely content is crucial in attracting visitors to your website. It helps you both draw traffic from search engines and create audience loyalty. *Unique, High-Quality Content*: When people visit a website for information, they want your unique spin on a topic. How is your material or content unique? Is that uniqueness obvious, and easy to find and to understand? Visitors want unique, high-quality site content. It is not only your home page content, but also all the linked pages should have useful and easy-to-understand content. Now-a-days, search engines have become very smart and they are able to understand complete grammar and complete phrase. Hence while ranking a page against other, the content available on a page matters. Sites with duplicated, syndicated, or free content are get given red flags by the search engines.

*SEO Content Writing (Copy Writing)*: SEO Content Writing (also referred as SEO Copy writing), involves the process of integrating keywords and informative phrases which make up the actual content of your website. While writing your webpage content, the following tips may help you in keeping it better than others. The content should be directed for the specified target audience. Keyword density is strictly adhered as per search engine guidelines. Titles should always be eye-catching, compelling your visitors to read on and want to know what you offer in your website. Do not use confusing, ambiguous, and complex language. Use small statements to make your content more understandable. *Keep your web pages short*: Organize and distribute the content on the web pages. Divide your web page content also into short paragraphs.

*Other Advantages of Having Great Content*: It is not only SEO you need to think about. Many factors contribute to make your site popular. If your site is having something really unique, then people like to suggest it to their friends. Other webmasters like to create a link of your site on their sites. Your site visitors start trusting on your site and they look forward for the next content update and keep coming again and again. Although you are listed out by search engine, a but net surfer will click only that page whose content snippet looks more unique and interesting.

### III. DESIGN

HUB OF <sup>4</sup>FIRMS is website helpful for the people seeking for the Toll-Free Number, Service Numbers, Customer Care Numbers, Head Office Address, Corporate Office Address, Detailed Information About Company, Branch Wise Location Address with respective Contact Number throughout India, Email Id of the particular Company and also the Official Website Link of the respective Firm.

For example if a customer wants to get the overall information about a particular company, then he/ she should search the details in various website. Moreover, the time taken for the searching process is also very high. Hence, to overcome this problem, we have taken this step to create website. Our website HUB OF FIRMS is a collection of the data which a customer needs to know about any particular company. The name itself indicates that the website holds the information of different companies throughout India irrespective of the type. Therefore From this website

everyone can get the complete details about various sector of organization in a single roof. No need of searching various websites on the internet.

It consists of category section in which an user can select the type of the organization they wants to know about. We include the categories such as Government organization, Private organization, Banking sectors, IT Companies and other miscellaneous categories. Therefore, if any person wants to check the details of the organization based on the category, then they can search it in the category module. Moreover, this category section is available o the sidebar of the page. Our website includes various sidebars and with the help of the search bar the user can search the information about a particular company which they are seeking for.

In the home page of our website the preview of the post which has been recently published. Because of that the user can easily get the data of a organization which they need or based on the requirement of a particular user. This data includes all the modules or categories of the organization. It consist of two side bar fields which is named as Recent Posts and the below of that section you can observe Categories Side bar. At the bottom part of the website consist of the looping part which is indicated in the numerical and defines the number of page contains in the website which is sorted by the recent posts. It means the based on the publishing time and date the recent post will be displayed at the top most part of the website home page. Each organization details are allocated with each webpage in the website.

#### A. <sup>5</sup>What Is Agile Web Development?

Agile web development is actually a broad category of methodologies based on the principles outlined in the Manifesto for Agile Software Development, which was compiled by a team of professional developers in 2001. Specific methods such a scrum and XP are considered agile although they existed before the manifesto was written. Through their combined experiences of working with other developers, the authors recognized the value of adaptive planning and collaboration between self-organizing, cross-functional teams. The goal is to allow for flexibility and provide **rapid and continuous improvement of software solutions**. Early delivery is also a key goal of agile development, which entails streamlining projects by eliminating time-sucking tasks.

Because they've been around for about two decades, a lot of the concepts behind agile development seem intuitive to younger developers; however, agile was a radical departure from older ways of doing things. Studies on the efficiency of agile web development compared to traditional methods are mixed, but agile remains popular in the professional world in 2017.

#### B. Traditional Web Development vs. Agile Web Development

Because the internet has evolved so rapidly in the past few decades, it's easy to forget that the World Wide Web isn't even 30 years old yet. During the infancy stages of web development, designers grappled with the basic task of translating the types of information you'd find in books into a website. They used paper prototypes, wire frames and flow charts to illustrate ideas. Use-case scenarios and focus groups were a primary source of feedback. Back then, CEOs would

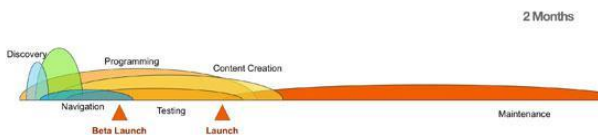
have their secretaries print out emails and then dictate responses, so there were obviously **large gaps of understanding** between users, developers and executives.

Developers soon discovered that creating software shouldn't be an entirely sequential process. There are always unexpected bugs as well as new technological hurdles to overcome, and anticipating the demands of users has become a science in itself. Fortunately, now that everyone is so well connected, it's easy to collect user feedback in real-time, so we have a greater understanding of how people interact with web applications.

The increase in internet users has coincided with advancements in content management systems, which has made it possible for anyone to design and edit a basic website with little training or expertise. These trends have given rise to industries that simply didn't exist a few years ago such as e-commerce. Since the process of making websites has become much more streamlined, developers have shifted focus to perfecting their methods to **address the growing needs of businesses and consumers.**

### C. The Move to Agile

The image below visualizes the traditional process of web development:



As you can see, parts of the development process overlap, but there is a clear sequence of steps. Agile development, on the other hand, views most steps of development as ongoing and simultaneous:



The biggest difference is that programmers are involved with content and navigation from the beginning. Individual challenges are addressed **as they arise** rather than waiting to make large-scale changes before launch. Beta launches have also become standard in order to start collecting feedback as early as possible, and maintenance is viewed as equally important to all of the other steps.

Therefore, everyone involved with a project from the top decision-makers to content creators to IT specialists should meet in-person during the early stages of development so that everyone agrees upon the overall goals. Though it may seem tedious at first, having everyone on the same page from the start saves time by reducing the need for constant emails, phone conversations, and meetings throughout the development cycle. Because all members of the team are engaged right away, what once took 4-8 months to finish can now be accomplished in just a few weeks.

### D. Agile vs. Waterfall

The typical agile web development process is composed of a series of "sprints," or cycles that involve discovery, design, development and testing. Every sprint results in a tangible product and new information to guide the next sprint. To better understand agile methods, it may be useful to compare it with the waterfall model, illustrated in the diagram below:

The waterfall model follows the traditional principles of sequential development whereas agile processes can be better visualized as a positive feedback loop:

Advocates of agile development may argue that the waterfall model is too rigid and ineffective; nonetheless, waterfall remains the norm in many workplaces, which is further evidence for why professional developers need to be adaptive to stay employed.

Aside from getting products to market faster, another advantage of agile methods is that they can require incremental investments. Then again, some investors are wary of such arrangements because they don't fully understand agile development, which may be one reason why the waterfall model persists.

### E. Agile Development Components

An agile workflow usually consists of multiple components. The following provides a breakdown of the components found in a typical agile web development workflow:

- **Product Backlog** - A spreadsheet, chart or simply a physical wall covered in index cards that list all of the features to be included in the final product. The product backlog provides a visual representation of the team's progress.
- **Sprint Backlog** - A list of the tasks to accomplish during a sprint. Before a sprint, the team chooses items from the product backlog and determines the tasks necessary to meet the user needs. Designers and developers independently assign priority and time estimates for each task, and that data is analyzed after each sprint to inform the next sprint. Some teams prefer to use a physical wall or whiteboard to keep track of tasks while others use free online task management tools like Trello.
- **Scrum Meetings** - Short, daily meetings to check in and set the course for the workday.
- **Scrum Master** - The facilitator of scrum meetings tasked with managing communication between team members.
- **Shippable Increments** - Tangible, fully-functioning applications that showcase a feature or the final product. Ideally, each sprint will result in a shippable increment.

A quick tip that's worth mentioning as you populate your product backlog is to create user personas. User personas are fictional characters that represent the goals, behaviours, and skills of your final product's potential users. Focusing on personas can help you identify **which features you need to**

**include.** User personas may be derived from data collected through interviews or focus groups

*F. Additional Benefits of Agile Web Development*

Apart from what was already covered above, there are certain concrete benefits to using agile web development methodologies compared to traditional or other methods. The following section outlines these benefits.

*1) 1. Faster Feedback*

First drafts are never perfect. In fact, sometimes you can follow a client’s specifications to a T, yet the final product looks nothing like what they had in mind. By completing tasks in iterations and having something tangible to share with users after each step, teams can make changes along the way and **avoid a complete overhaul** six months down the line. Having brief, daily scrum meetings gives team members an opportunity to communicate about individual small issues and resolve them before they become big problems for everyone.

*2) 2. Keeping Up With Change*

The old adage “change is the only constant” couldn’t be truer when it comes to web development. Instead of viewing changes as unexpected obstacles to overcome, agile developers embrace change as an inevitable part of the learning process.

*3) 3. Higher Productivity*

Agile processes provide ample opportunities to measure productivity, which helps project manager’s better estimate workloads.

*4) 4. Lower Costs*

Faster and more efficient development eliminates the need for overtime pay.

*5) 5. Greater Customer Satisfaction*

Since applications go through so many checks before launch, customers are more likely to get a bug-free product that they are happy with.

*6) 6. Improved Worker Morale*

When team members get to see the fruits of their labour in shippable increments, they know they’re progressing in the right direction, which encourages them to keep working toward a goal. Team members are also more likely to feel a sense of shared ownership in the project, which is more motivating than artificial urgency.

*7) 7. Better Accountability*

Iterative methodologies make it easier to track the performance of individual team members, and it gives managers a way to measure the team’s overall commitment level throughout the development process. This information can help them set more realistic goals and give executives accurate timelines.

*8) 8. No More Detailed Project Plans*

Forgoing a project plan isn’t the same as not planning. It simply means that you don’t need one specific document that you update every time you learn something new. Agile development’s focus on frequent releases encourages an iterative learning process, so there’s no reason to waste time and energy managing a document.

*9) 9. More Collaboration*

In offices that still use the waterfall method, some team members may rarely interact. Designers often send off their designs to developers and simply move on to the next task. In agile workplaces, designers and developers often sit next to each other while working collaboratively on each iteration, which results in a more polished final product.

*G. Keeping it Agile*

When trying to hold yourself or your teammates to agile principles, **ask the following 5 questions** whenever someone throws out an idea:

1. Will it help us achieve our goals?
2. Is it consistent with our brand?
3. Is there a better solution that already exists?
4. What is the worst that could happen if we tried it?
5. How will we evaluate whether or not the idea was effective?

Ongoing assessment is imperative to staying agile. Keeping what works and changing what doesn’t help everything move toward completion as quickly as possible.

*H. Agile Web Development - In Summary*

Web development is about much more than making websites and applications. Development also includes the business side of the equation, and programmers are constantly going back to tweak technologies to meet the specific needs of companies and their shareholders. A web developer’s job is never truly ever done. Understanding the many facets of the development process will leave you better equipped to work in a professional environment. As agile web development becomes more and more widespread it’s important to stay up to date on any new developments in the world of agile development and practice it on a daily basis.

The Design methodology followed for the mining of the customer care contacts of various organizations is as given below:

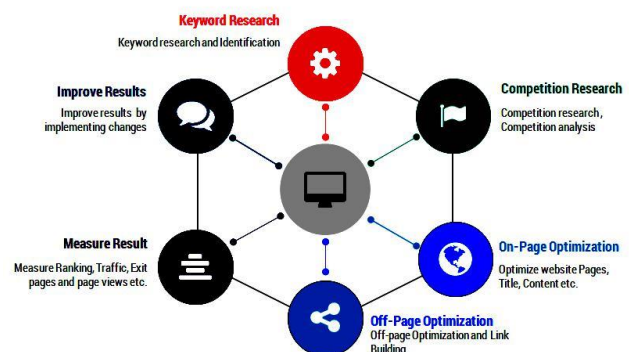


Figure 2.1: *SEO Process for the CCC using SEO*

In this process we have followed the top down approach to facilitate the users to produce effective finding of the website information without ceasing.

- a) *Keyword search:* Keywords are the main contents to ping the correct path and page. Every website key words must be chosen

carefully so that they can track a reliable information at any time

- b) *On-Page Optimization:* The optimization of web pages is a mandate in order to reach the desired point of information in the webpage. The correct content is always a choice for the user from any search engine.
- c) *Measure Result:* The results can be measured by any kind of tools in SEO. The results are available in the form of ranking, traffic, most searched, least searched, number of views etc.,
- d) *Off-Page Optimization:* The link binding causes the effective off page optimization. The off page optimization is possible highly technical engines like Google and Bing.

#### IV. THE RESULTS

The outcome of the above process was depicted in the following screenshots of the results collected from <https://customercarenumber.freshersnow.com/>

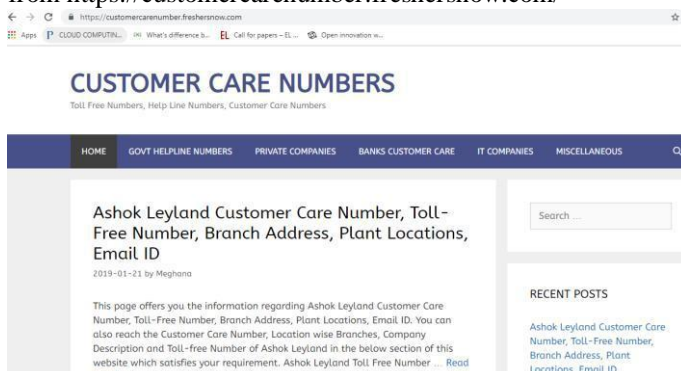


Figure: 4.1 Home page

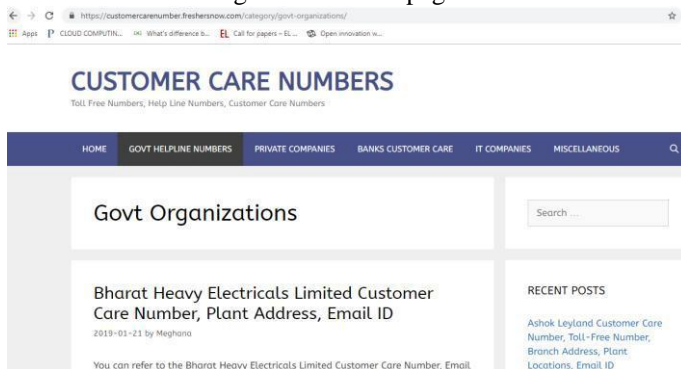


Figure 4.2: Government Organizations

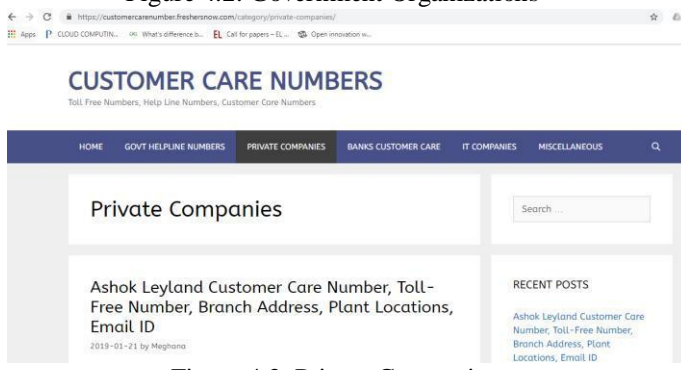


Figure 4.3: Private Companies

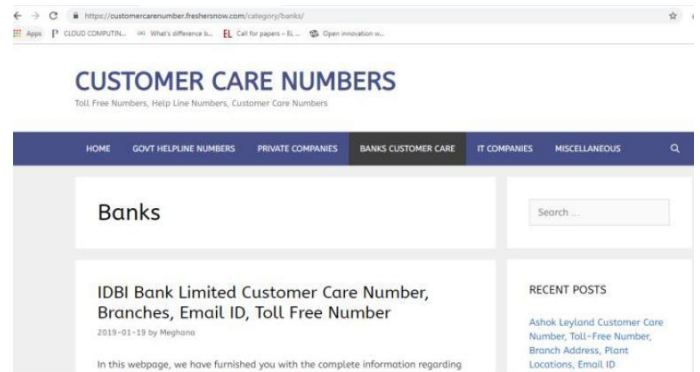


Figure 4.4: Banks

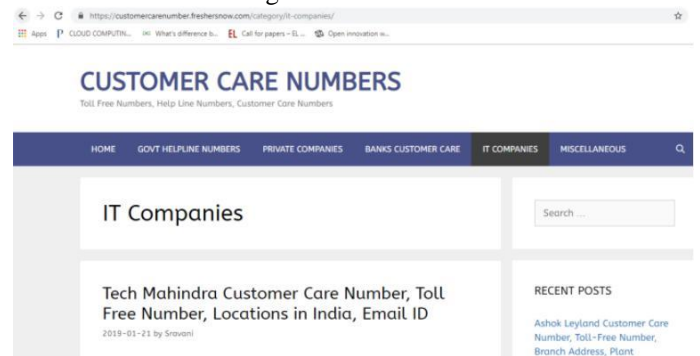


Figure 4.5: IT Companies

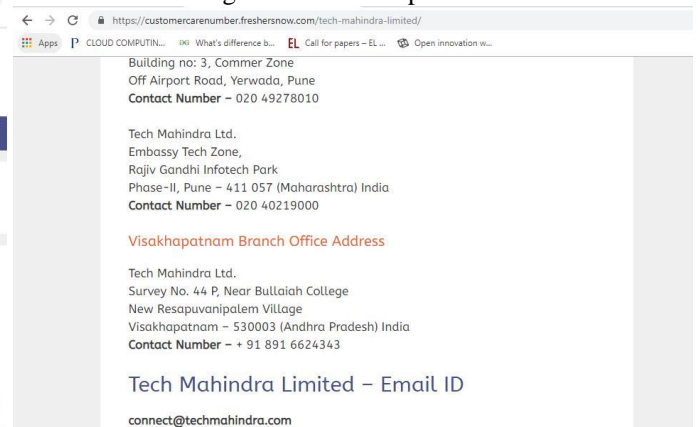


Figure 4.6 The contacts of reputed Organizations

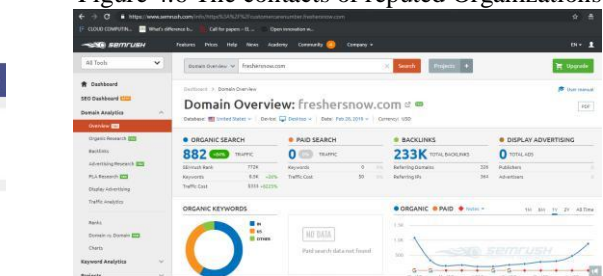


Figure 4.7 The SEMRUSH display of the website analytics

#### V. CONCLUSION

With the help of SEO Tools like SEMRUSH, HREFS, Google Ad Words etc., we can emulate the website traffic and the income also lifted off to the higher levels of business. Any organization these days requires such type of hype for their environment in the IT market. With the help of content accuracy and keywords and tags any website can reach the desired results of the business.

The above diagram and approach helped the customer care contact number search made easy with bit of hard work. Thanks to SEO tools in web development environment. T

This project can be enhanced to mobile application development and also extended to cloud services by deploying the website with the necessary tools enabled in any kind of cloud platform.

## VI. REFERENCES

- [1] Search Engine Optimization: Your Visual Blueprint for Effective Internet ... By Kristopher B. Jones pp 293.
- [2] Content Rich: Writing Your Way to Wealth on the Web By Jon Wuebben pp 225.
- [3] Search Engine Optimization for 2017; on Page Seo, Off Page Seo, Keywords Front Cover Christopher Nash CreateSpace Independent Publishing Platform, 23-Aug-2016 - 90 pp.
- [4] Leading Firms: How Great Professional Service Firms Succeed & How Your Firm ... By David Kuhlman pp 82
- [5] Agile Web Development with Rails 5.1 Sam Ruby, David Bryant Copeland, Dave Thomas Pragmatic Bookshelf, 16-Nov-2017 - Computers - 464 pages
- [6] <https://www.webfx.com/blog/web-design/agile/>

## BIOGRAPHY



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