

# The Main and Basic Differences between the Google Search and ChatGPT Application

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**Abstract-** This study aims to focus on two tools used by millions of user, Google Search and ChatGPT (Chat Generative Pre-trained Transformer), Google Search is a web search engine that allows users to search the internet for information, while ChatGPT is a natural language processing tool that allows users to communicate with a Chabot using natural language. Both tools use machine learning algorithms and natural language processing to understand and respond to user inputs, but they serve different purposes and are used in different ways.

**Index Terms-** google search, ChatGPT, web based, NLP, AI.

## I. INTRODUCTION

Google Search and ChatGPT (Chat Generative Pre-trained Transformer) are two different tools the one is developed by Google whereas, ChatGPT developed by OPENAI, but they serve different purposes. Google Search is a web search engine that allows users to search the internet for information. It uses a proprietary algorithm to provide the most relevant and accurate search results for a given query, taking into account a variety of factors such as the words used in the query, the relevance and reliability of the websites, the user's location and search history, and the overall structure of the internet. Google Search also offers advanced search features, such as the ability to filter results by date or type of content, and the ability to search within a specific website or domain. On the other hand, ChatGPT is a natural language processing tool that allows users to communicate with a Chabot using natural language. It uses machine learning algorithms to understand and respond to user inputs, and can be used for a variety of purposes such as customer service, language translation, and more. ChatGPT can be integrated into chat or messaging platforms, and can also be used in standalone applications.

## II. RESEARCH IDEA

Google Search is a search engine provided by Google that handles over 3.5 billion searches per day and has a 92% share of the global search engine market. It is also the most visited website in the world. The order of search results returned by Google is based, in part, on a ranking system called "PageRank." Google

Search offers many options for customized searches and specialized interactive experiences, such as flight status and package tracking, weather forecasts, currency and unit conversions, and more. The main purpose of Google Search is to search for text on publicly accessible websites, as opposed to other data such as images or information in databases. It was developed in 1996 by Larry Page, Sergey Brin, and Scott Hassan, and in 2011, Google introduced "Google Voice Search" to search for spoken words. In 2012, Google introduced a semantic search feature called the Knowledge Graph. Analysis of search term frequency can reveal economic, social, and health trends, and data from Google Trends has been shown to correlate with flu outbreaks, unemployment levels, and other phenomena faster than traditional methods of reporting and surveying. As of mid-2016, Google's search engine has begun to use deep neural networks.

Many webmasters try to influence their website's rankings on Google, the most popular search engine, through a practice called search engine optimization (SEO). This industry helps websites improve their rankings on Google and other search engines by identifying patterns in search engine listings and developing strategies to increase their visibility. SEO involves both on-page factors, such as body copy, title elements, and image alt attributes, and off-page factors, such as anchor text and PageRank. The goal is to improve a website's ranking in Google's relevance algorithm by including targeted keywords in various places on the page, particularly the title element and body copy. However, using too many occurrences of the same keyword can make the page appear spammy to Google's algorithms. Google has provided guidelines for legitimate SEO consultants and has addressed problems with specific websites, such as the one mentioned in The New York Times article about DecorMyEyes, through undisclosed fixes to its algorithm. Google Search Console can also be used to check for websites with duplicate or copyrighted content.

ChatGPT was trained to improve its performance using a combination of supervised learning and reinforcement learning techniques. For supervised learning, human trainers provided the model with conversations where they played both sides: the user and the AI assistant. For reinforcement learning, the model was fine-tuned using Proximal Policy Optimization (PPO) algorithms, which are more efficient than trust region policy optimization algorithms. The training was conducted on Microsoft's Azure

supercomputing infrastructure in collaboration with human trainers who ranked the model's responses from previous conversations to create "reward models" for further optimization. In contrast to its predecessor, InstructGPT, ChatGPT tries to reduce harmful and deceitful responses. For example, while InstructGPT accepts the prompt "Tell me about when Christopher Columbus came to the US in 2015" as true, ChatGPT uses information about Columbus' voyages and knowledge about the modern world, including perceptions of Columbus, to construct an answer that assumes what would happen if Columbus came to the U.S. in 2015. ChatGPT's training data includes man pages and information about internet phenomena and programming languages, such as bulletin board systems and the Python programming language.

Unlike most chatbots, ChatGPT is stateful and can remember previous prompts within the same conversation, which has led some journalists to suggest that it could be used as a personalized therapist. To prevent offensive output, queries are filtered through a moderation API and potentially racist or sexist prompts are dismissed. However, ChatGPT has several limitations, including the potential for its reward model, which is based on human oversight, to be over-optimized and hinder performance (a phenomenon known as Goodhart's law). Additionally, ChatGPT has limited knowledge of events that occurred after 2021 and may not have information about certain celebrities. In training, reviewers tended to prefer longer answers regardless of their accuracy or comprehensiveness, and the training data may also be biased due to the inclusion of vague descriptors of people, such as a CEO, that could result in responses that assume such a person is a white male.

### III. MAJOR DIFFERENCES

One key difference between Google Search and ChatGPT is the type of information they provide. Google Search is primarily used for finding information on the internet, while ChatGPT is used for communicating with a Chabot. However, both tools rely on natural language processing to understand and respond to user inputs, and both can be used for a variety of purposes. Another difference is the way in which they are used. Google Search is accessed through a web browser, while ChatGPT is typically integrated into chat or messaging platforms or used in standalone applications.

Google Search is one of the most widely used search engines on the internet, handling more than three billion searches each day. It is an essential tool for finding information on the internet, and is especially useful for research purposes due to its advanced search features and the vast amount of information it indexes. Google Search also integrates with other Google tools, such as Google Maps, Google Translate, and Google Scholar, which provide additional functionality and information.

ChatGPT, on the other hand, is a relatively new tool that has gained popularity in recent years due to its ability to communicate with users in a natural and intuitive way. It is used in a variety of applications, such as customer service, language translation, and more, and has the potential to revolutionize the way we interact with computers and artificial intelligence.

Computers and artificial intelligence through its ability to understand and respond to natural language inputs. ChatGPT can be used in a variety of applications, such as customer service, language translation, and more, and has the ability to learn and adapt over time to improve its performance.

Overall, both Google Search and ChatGPT are valuable tools that can be used in different ways to help users find information and communicate with others. While they serve different purposes, they both rely on natural language processing and machine learning algorithms to understand and respond to user inputs, and they both have the potential to improve the way we interact with technology.

### IV. CONCLUSION

In conclusion, Google Search and ChatGPT are two different tools developed by Google that serve different purposes. Google Search is a web search engine that allows users to find information on the internet, while ChatGPT is a natural language processing tool that allows users to communicate with a Chabot. Both tools use machine learning algorithms and natural language processing to understand and respond to user inputs, but they are used in different ways and serve different purposes. Google Search is an essential tool for finding information on the internet, while ChatGPT has the potential to revolutionize the way we interact with computers and artificial intelligence.

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