

Research in Web and Information Retrieval

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Date of Submission: 05-07-2023

Date of Acceptance: 15-07-2023

ABSTRACT

In this research article, we look at data on web searches and data retrieval on the WWW (World Wide Web). When we use data research, we use the web to get information about that topic. How to get the personal site information's answer from that particular information. We analyze and view certain aspects of the website and collect information.

Keywords: Internet research; data recovery.

Website and Data Recovery are two important things that need to be addressed.

The World Wide Web (WWW) was launched in the early 1990s. The growth of the Web has resulted in a large amount of information that makes important information difficult to find. Data retrieval is the process of extracting important information from large data sets. This article explores the meaning of

web and data recovery.

• Web Research

Web Search for the World Wide Web (WWW), a network of web pages and websites that connect to users via the Internet.

The Website also includes technologies and standards such as HTML, CSS and JavaScript that enable the creation, distribution and use of content on the Internet. The web has become an essential part of our daily lives, with many sources of information presenting information, communication, entertainment and global commerce in greater detail.

Web History covers the development and evolution of the World Wide Web since its inception in the 1980s. It truly covers the world, as well as the technologies and innovations that have led to the current state of the Internet, as well as the social and cultural impact of the Internet on the site.



Fig : Web Research Ref From Google india.com/web-internet

Examples of how the web is growing everywhere :

1. Ecommerce: Much of ecommerce for online shopping sites is buying and selling products online and

providing payments and services to customers around the world.

2. Communication: The rise of social media such as Facebook, Twitter, and Instagram has changed the

the way people communicate and share information, creating new opportunities for business and connecting people.

3. Digital Marketing: The web has changed the way companies market their products and services, allowing them to reach a global audience by focusing on advertising, marketing research and social media.

4. Online Education: Having online courses and programs democratizes education, making it easier and cheaper for people all over the world.

5. Cloud Computing: The development of the cloud has made it easier for businesses and individuals to access and store information, collaborate remotely, and measure their work.

Overall, networks have had a profound impact on society, opening new avenues for communication, education, business and innovation. As new technologies and emerging platforms push the boundaries of online possibilities, its past continues to shape its future.

Web is a term used to refer to the **(World Wide Web) WWW**, a search for

Uniform Resource Locators (URLs) that displays hypertext files and their probable information. Ori

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reated as a way for scientists to share scientific information, the web has become an essential communication, business and entertainment tool for millions of people around the world. The Network contains millions of websites, each containing pages of text, images, audio, video and other media.

These websites are hosted on servers around the world and can be accessed by users via

URL's (Universal Resource Locators) or links from other web pages.

The web has changed the way we live, **work** and **communicate**.

By enabling people to connect and collaborate across geographies and cultures, it provides unprecedented access to knowledge and information and creates new business and business models.

But the web also brings with it new problems and concerns, such as online privacy and security, the spread of fake news and information, and the digital divide that is preventing some communities from accessing the internet.

The web has become an integral part of everyday life, connecting people and information around the world. Despite challenges such as security threats, privacy concerns, and misinformation, the website continues to be updated and updated to meet expectations among users and the community.



Fig:Types of Websites Ref from Google www.educba.com

Types of websites are:

1. ECommerce Websites: These websites are used to buy and sell products to customers and provide online services everywhere.

2. Blogs/Internet Sites: Websites or online diaries that allow people to share their thoughts and ideas.

3. Social networking sites: These sites are designed to communicate with people far from their location through social networking sites.

4. News Sites: These sites provide daily updates on information and current events.

5. News sites: These sites that show detailed information

mation about a topic or phrase, such as Wikipedia.

6. Educational Sites: These sites are educational sites for all users.

7. A network is a system of various devices and technologies. At a high level, communication can be divided into two main parts: **clients (or front-end) and servers (or back-end).**

8. Personal websites: These are their users' interests in hunting, freelancing, creativity, etc. websites created for their own purposes.

9. Government websites: Websites that provide information and services regarding government institutions and services.

10. NonProfit Websites: These websites are designed to raise awareness or raise funds for non-profits.

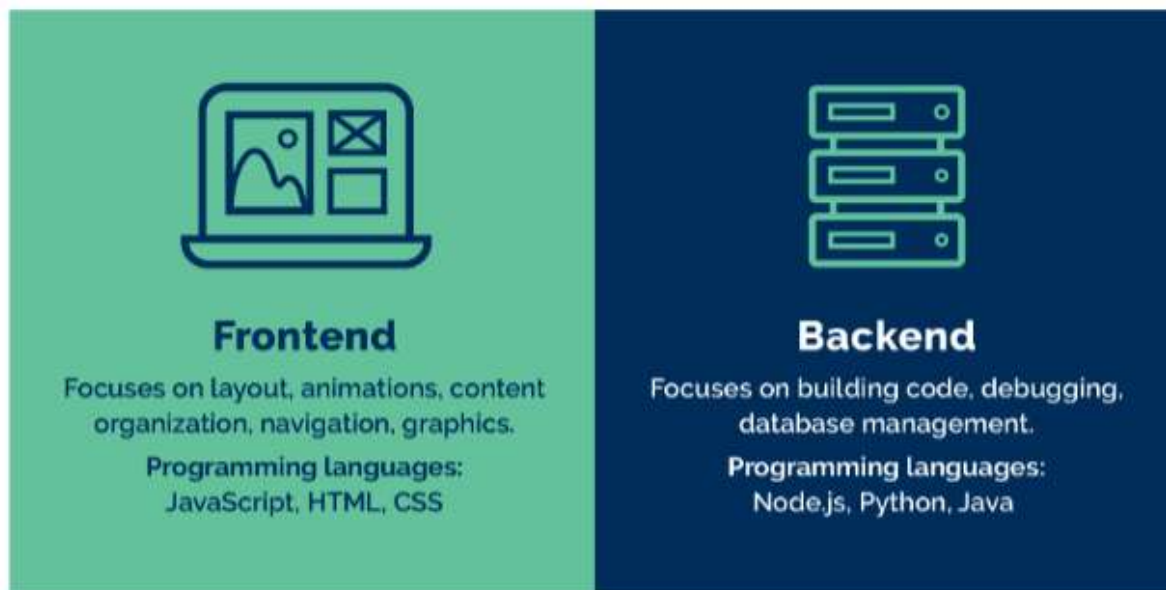


Fig: Website front end and back end Ref from Google kenzie.snhu.edu

Frontend:

The front end of a web application usually includes everything that happens in the client or browser. This includes the **HTML, CSS, and JavaScript** that make up the user interface and everything the customer needs to manage user interactions.

The backend is responsible for processing and storing data and performs any action or operation that cannot be performed by the client. This usually includes server-side programming languages such as **PHP, Ruby or Python**, as well as **databases** such as **MySQL or Postgres**.

Implementation:

Web applications often involve building **frontend** and **backend** components separately and then connecting them together via APIs or other interfaces. To create the Frontend, developers often use **HTML, CSS, and JavaScript** to create the web design and functionality of the site. Tools and **frameworks** like **React.js and Angular** are often used to make this process faster and more efficient. To build the backend, developers often use programming languages such as **PHP**,

Ruby or Python and **database** management systems such as **MySQL or Postgres**.

The backend is responsible for processing and storing data, handling any business logic or functionality that the front-end cannot, and integrating third-party services as needed.

After the frontend and backend are created, the developer sends the application to the web server such as Apache or Nginx. This allows users to access the application over the internet. To improve performance and reliability, developers can also use load balancing, caching systems, and other tools to improve application performance and security. These sites provide entertainment content such as movies, music, movies and games.

A network is a complex system made up of many components and technologies. At a high level, communication can be divided into two main parts: **clients (or frontend) and servers (or back-end).**

Background

The World Wide Web is a collection of interconnected information accessible over the Internet. The web continues to grow and has become an important source of information for people all over the world. The development of the web has led to th

e proliferation of information. However, the amount of information available on the web makes it difficult to find relevant information.

Data retrieval is the process of extracting important data from large files.

Retrieval data is an essential part of web search engines designed to help users find the information they are looking for on the web. Information retrieval systems use a variety of techniques, such as text mining, natural language processing, and machine learning, to identify and present important information to users.

Information Retrieval

Content research is the process of finding information about a topic or topic. It involves using a variety of research methods, including keyword searches, topics, and Boolean operators to identify relevant products.

Search The main purpose of Search is to enable users to find the items they need quickly and easily by providing access to quality information in a database or library catalogue.

Research is used in many fields such as information management, library research, and technology. It is particularly useful in an academic setting, helping students and researchers find textbooks, books, and other materials relevant to their research topic.

Types of Information Retrieval: -

- 1. Keyword retrieval:** This method uses keywords to get information from a database or search engine. Users enter specific words or phrases relevant to their questions, and the system stores files or documents containing the words.
- 2. Natural Language Processing (NLP):** This technology involves using advanced algorithms to understand and interpret the questions' questions. It involves analyzing the syntax, structure and meaning of sentences to obtain information about the question.
- 3. Information search:** This method involves searching for information based on context rather than specific words or phrases. It relies on semantic analysis of the query to extract key terms and their relationships.
- 4. Metadatabase retrieval:** This method involves the use of metadata such as author, date, or other identifying information to search and retrieve relevant information.
- 5. Content Based Access:** This technique involves getting information based on the actual content

of the document or file. It is typically used for image, video or music retrieval where the system searches for content based on colour, image or sound.

Some common subject retrieval tools include:

1. Library catalogs: These are online databases that provide access to library collections of books, journals and other materials.

2. Documents: They are digital document archives created by subjects such as newspapers, magazines or newspapers.

3. Subject headings: Structures used to describe the content of a book or article.

4. Indexing: This includes the use of metadata to classify and organize information in files or directories. Recovery programs are constantly evolving as new technologies and strategies become available. That's why information professionals should be aware of the latest trends and tools to help users find the information they need.

Data recovery is the process of accessing and extracting information stored in files, documents or other documents. Using data retrieval has several steps, for example:

1. Identify the data source: The first step in using data retrieval is to identify the data from the required data. This could be a database, file or even a web page.

2. Query Build: After analyzing the data, the next step is to create a query that collects the required data. This includes analyzing the search process and the pattern of results obtained.

3. Connect to the data source: The next step after creating the query is to connect to the data source. This may include connecting to a customer database, accessing data in a local or remote database, or using an API to access web pages.

4. Execute queries: Once the connection is established, queries can be executed to get the required information. Depending on the complexity of the query and the size of the file, this may take some time.

5. Processing results: When data is received, it must be processed and formatted so that it can be used by the application or system requesting it. This may include collecting, filtering or analyzing results depending on requirements.

6. View results: Finally, the returned data should be displayed to the user. This may include presenting it in a table or graph, creating a report, or visualizing it in a way that is meaningful and useful to the user.

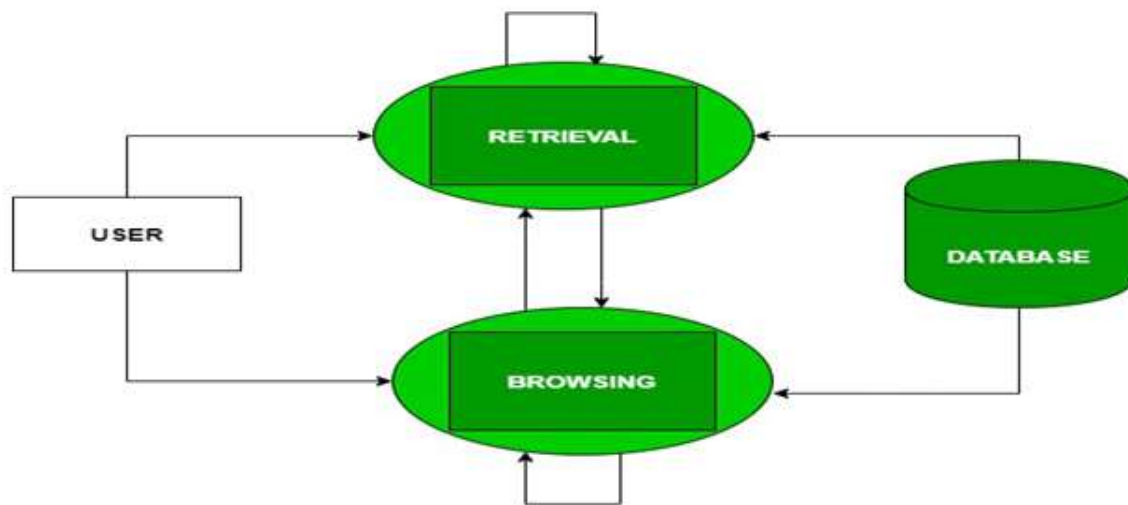


Fig: Website front end and back end Ref from Google geeksforgeeks.org

Web and Data Retrieval Techniques:

Web and Data Retrieval is the key technology for Internet research. This technology uses algorithms and models to analyze and evaluate user queries and return relevant and accurate information. Data retrieval techniques include indexing and ranking web pages according to their content and relevance to user queries.

Advantages of Web and Information Access:

- 1. Fast and Effective Search:** Web and IR technology makes searching the Internet fast and efficient.
- 2. Good results:** Provides users with good and useful research results.
- 3. Easy Access to Information:** This technology allows users to easily access a wide variety of information online.
- 4. Doing it right:** Using the right technology improves the accuracy of search results and makes the search process more efficient.
- 5. Personalized Search:** Web and information storage technologies enable search results to be personalized according to user interests and preferences.

Disadvantages of Web and Information Access:

- 1. Information Access:** With millions of web pages available online, users can easily review available information.
- 2. Too much information:** Users can be bombarded with irrelevant information, making it harder for them to find what they want.
- 3. Algorithmic Bias:** Website and database algorithms can be biased, resulting in biased search results.
- 4. Difficult to identify unreliable sources:** With so much information available online, it can be difficult to identify useful information.
- 5. Restricted access to information:** The information system may not be able to access all the information on the site, so the search possibilities may be restricted.

Methods

Various research methods were used in this paper, including literature review, case studies, and interviews. The literature review provides an overview of the latest technology in the web and data retrieval. This case study provides insight into the practical use of data storage in various industries. These interviews provide firsthand insight into the challenges medical professionals face in finding information.

Global Data/Statistics data production, capture, recycling and use from 2010 to 2020 and forecast from 2021 to 2025

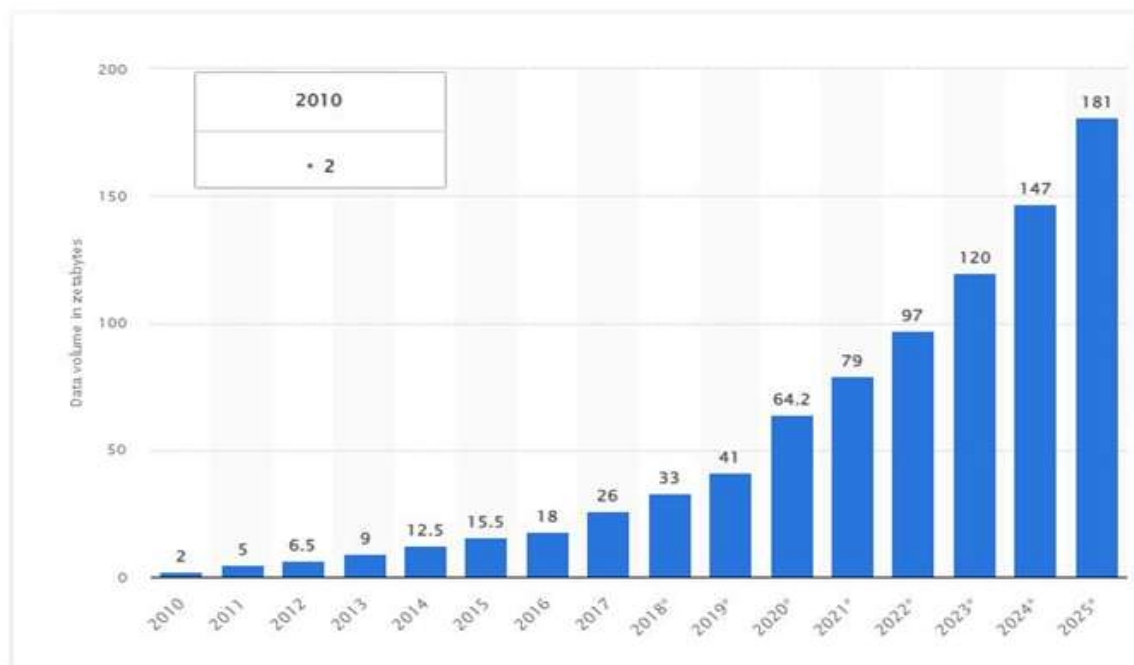


Fig: Statistic Data/Information Ref from Google www.statista.com/statistics

The volume of information production, use and storage is projected to 2010-2020, 2025

The total amount of data created, captured, recycled and used worldwide is expected to grow rapidly to reach **64.2 ZB** by **2020**. **ZB**.

The value of data creation and recycling reached new heights in **2020**. Growth is higher than previously expected due to increased demand due to the **COVID19** pandemic as more people work and study from home and spend more time at home again.

Storage capacity is also increasing

However, only a fraction of newly created data is stored, only **2%** of data created and used in **2020** is saved and retained until **2021**. storage is expected to increase with a CAGR of **19.2%** over the forecast period **2020-2025**. In **2020**, the base storage capacity goes up to **6.7 ZB**.

RESULTS

The results of this study show that communication and data recovery are constantly changing. New methods and procedures have been developed to increase the accuracy and precision of the data recovery process. Research also shows that data recovery plays an important role in many industries such as **healthcare, finance** and **e-commerce**.

CONCLUSION

In summary, this research paper provides an in-depth analysis of the web topic and data. The results of this study show that data storage is an essential part of the web and many other businesses. The challenges facing information seeking are complex and require ongoing research to improve the accuracy and precision of the information retrieval process. The future of communications and data recovery is bright, and it looks like new developments in technology will continue to advance.

Web and information retrieval means the technologies and methods used to find, access and retrieve information from the Internet or other digital sources.

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