

Flight Search Techniques in Web Development

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Abstract—The modern airline search system is inclusive set of similar products to present a system that provides money to a wide variety of airline management tasks and provides services to the customers from the time of initial reservation to the completion of reservation. Travelling by air is one of the most common modes of travel. Now-a-days airline companies provide a wide range of timings for the customers who wish to travel by air. Increase in trade and investment leads to greater moment of people, goods, capital. Due to this the frequency in travel increases there is a need to provide an intelligent application that is capable to meet the needs of travel. The objective of the project is to create an Airline search system where travelers can search for availability information of their desired flights and system returns the result in more efficient manner than the existing system.

Keywords—Web Scrapping, Elastic Search, Cluster, Index, Shards

I. INTRODUCTION

The airlines have managed to reduce the distance between the places which are located miles apart to merely in hours and minutes. There are many airlines that covers thousands of miles every day and therefore travel has become an acceptable part of one's routine. To ensure that we get to where we need on time travellers have to search flights in advance. A majority of airlines have online based search system as most of the travellers search flights to facilitate their travelling process by booking their flights online. The search results are returned by querying the database. For improving the efficiency elastic search is implemented. [1]

Web Scraping is also called as data scrapping which is utilized to draw out data from websites. This is a stack that may approach WWW(WorldWideWeb) using HTTP(HyperTextTransferProtocol) or along with a browser.

The content may be parsed, searched and the data is transferred to a spreadsheet. This is also utilized for applications such as contact scraping, web indexing, web mining etc....Web pages are designed using markup languages such as HTML and XHTML and it comprises of useful information. Most of the web pages are built for end users but not for automated use. Hence, web scraping is an API (Application Programming Interface) which is utilized to draw out the information from a website. Amazon AWS and Google supply web scraping instruments and the information available for public for free of cost. [2]

Elastic search is a near real time search platform which means to say that there is only some small amount of time latency from the time you index a document until it becomes available for searching.

Cluster is a collection of one or more nodes (one or more servers), the name of a cluster should be unique otherwise we might enter accessing wrong clusters. A node is a single server which is a part of cluster. Each node must be provided with a unique name. By default, the naming is

provided using UUID (universally unique identifier). All nodes by default belong to a cluster called elastic search. A cluster can have several nodes.

Index is a collection of documents that have similar characteristics. Index is identified by a name. A cluster can have many indexes. Each index can have only one type. An index can store large amount of data that exceeds storage space or reduces the time to search. To solve this problem, we can divide an index into multiple pieces called shards. When we create an index, we can tell the number of shards we want. If the shard or index goes offline or disappears to this end, elastic search allows to make one or more copies of index shards into what are called replica shards. Document is an information of a single person "It is like a single row in a database table". The document is expressed in json.

II. RELATED WORK

Searching techniques including Elastic search have been studied by many researches. Although there are many researches conducted in past for analyzing the real time search techniques, these techniques play an important role for new trends in Travel and Tourism industry which in turn helps for all organizations associated with this field. This survey also explores challenges and future issues of search techniques.

Alexis Michaelides et.al [3], This paper proposes evolution of modern software agent technology which has given rise to an extensive overuse of the term agent. It also provides the reader with some thoughts, ideas and questions on the general subject of agent theory and intelligent systems, solely as a starting point for further research.

Courtney McTavish et.al [4], This paper describes a system which uses an agent to perform search, booking activities which can improve the speed of the search and reduces the cost and this also proposes an agent that travel from hotel to hotel by calculating details on the list of available facilities, price and customer experience.

Bogdanwalek et.al [5], This paper proposes fuzzy approach and expert system for hotel booking. The proposed approach is based on evaluating hotel services for different kind of hotel guest. The output of the expert system is a proposal of suitable hotel services for hotel guest during the process of hotel booking.

Landro Castro et.al [6], This paper presents a paradigm of system in the areas of San Juan, Argentina, to recommend tourist package based on priorities and interest of every user. AI (Artificial Intelligence) methods are utilised to separate and customize the information.

Marcin Bajer et.al [7], This paper is used to process Iot(Internet Of Things) data through the implementation of elastic search. The tools were designed to handle large number of log data, it can be applied to store, search and visualize other type of information -which includes IoT data. Different kinds of preferred devices employed in the building of ABB Corporate Research in Krakow have been

used to show practical implementation. In the current system, real data produced from different subsystems in the building has been combined into one Elasticsearch based solution for future computing. The data will be used to develop data analytics to extract and visualize meaningful insights about building operations. Further, selected data is sent to the Azure cloud to use its abilities in big data processing and machine learning.

Tiago Vieira et.al [8], This paper proposes about information security which is an incrementing issue in institutions and organizations. This issue is even bigger in the finance sector, not only due to the financial capital involved but also clients and organization's private and delicate information. As a path to test security in many structures, collection of networks, deployed web applications and many other assets, institutions have been performing penetration testing (pen test) which simulates an attacker's behavior in a controlled environment in order to recognize its vulnerabilities. This article aims on the synthesis of the results of security audits conducted on different financial web applications from one institution with aid of automatic tools in-order to evaluate the web applications security level. To help in security matters, different institutions build security frameworks for vulnerability assessment, security assessment, threat modelling, penetration testing, risk management and many more. Concerned with penetration testing, institutions such as OWASP provide vulnerability and safety data, a testing analysis, risk analysis and penetration testing instruments.

Sheryl Mathew et.al [9], This paper proposes about Mobile Cloud Computing (MCC) and Internet of Things (IOT) which are two of the fastest growing computing technologies in today's world. The biggest issue in these emerging technologies is their security weakness, In order to overcome this problem they have developed a system which combines the traditional user id and password mechanism with multimodal biometrics which includes fingerprint authentication and face recognition. They have also introduced a new technique of pictographic passwords which involves digital signature to further improve the security of data.

The following table contains information about different agents and respective technologies used:

Number	Started	Company	Country	Technology Used
1	2000	MakeMyTrip	India	Amadeus Master Pricer
2	2006	Yatra	India	Alamai intelligent platform, Appnomic, Bigrock, clouinary
3	2006	Clear Trip	India	Price watch – A tool
4	2006	Redbus	India	Peru based bus tracking

Table 1: Comparative Analysis of Flight Agents

III. CONCLUSION

In this paper a survey of various agents and searching techniques has been done. A comparative analysis on various agents and their technologies used has been made. Web applications have led to development of fast and efficient techniques. Online search and reservation has been made possible by development of World Wide Web, thus the searching plays an important role in web applications. It is necessary develop an efficient search system to improve the efficiency.

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