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Integrated Information Platform for Information about Indian Universities: A Survey

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Abstract: ***The process of finding appropriate universities has been a bustling work as it comprised of considering all the factors (like Location, Tuition-Fees, Courses offered, Facilities given, etc.) that matter to the student who wants to apply to that university. This was a time-consuming process hence we propose an integrated platform for information about Indian Universities which provide a wealth of tools and information that assist individuals in choosing their career wisely and would benefit from it. This makes it easier for prospective students to locate a university suited to their personal interests as well as get appropriate information based on their current academic profile.***
Keywords: University website, Indian universities, University finder, Web application, University information.

I. INTRODUCTION

A university information system must provide information about research and scientific cooperation offers, education and further education capabilities. The ongoing reforms of education and the adoption of various degrees by the students affect the further development of university application. New systems were introduced such as e-learning systems, course evaluation software and other proprietary developments. The need for integration comes from increasing requirements to combine data throughout the whole university or department and to extract information for the university. An integrated university information platform must improve the communication between students and management.

Initially it was a challenging process to find appropriate universities in minimum span of time as we need to lookout for all aspects/features of universities like its courses offered, fees, cut-offs, and general information about it. Thus, to simplify this process we are developing an integrated platform for information about Indian Universities which helps users to search universities as well as filter them according to various filters selected by users to minimize the results and simplify the process. The information system works on the data provided by the user on their profile which basically consists of academic data. The user can also add the specific universities to their wish-list to review it faster. There is a function called career section provided where the user can view the career options that are available to opt for according to their liking. This fully functional website is programmed in JAVA language and the data is stored in the MySQL Database.

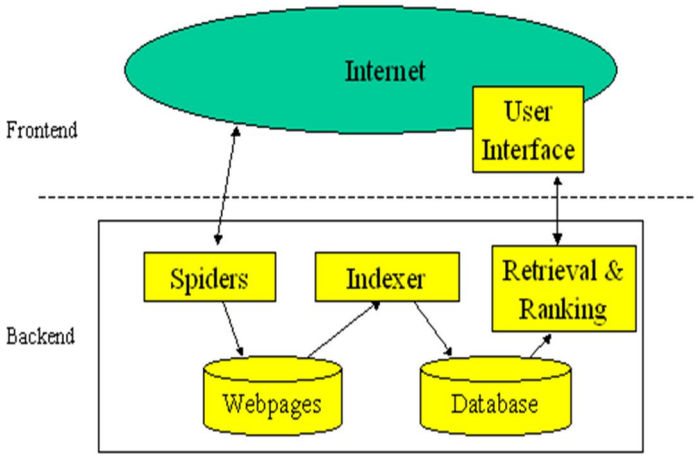


Fig. 1 Typical architecture of university information portal

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Having an outstanding website that is easy to navigate and provides necessary information is very important. Students have high expectations regardless of whether they are online for work or personal reasons. As a result, there must be a website which gives all the necessary information to the users about universities. We must not forget that parents and high school students use the Internet as an initial tool to shop around for the best university. A major concern of this is to project the universities effectively. The goal of this is to effectively present the universities through the website.

No empirical study has been done to evaluate whether university websites are effective. The focus of this study is to explore the effectiveness of websites which gives information about the Indian universities based on characteristics that have been identified in the literature. The research question is whether the universities website presents relevant information and are they effective in attracting the target audience.

II. LITERATURE SURVEY

There are majorly two ways in planning a website, firstly to determine the goals and resources needed to achieve them, and another is to specify the target audience, site details, technology needed, and study of the results. Thus, the web designers need to understand what the respective organization wants to showcase on the web. A university information website has two types of audiences. The first audience is academic students. The second audience is the people and other institutions. There is considerable amount of evidence to suggest that more and more universities are using the Internet as a tool to admit students to their institution. Regrettably, institutions have failed to meet students' university search requirements. [1]

The importance of this issue is highlighted by the observations resulting that an average student will not spend much time on a website if the student doesn't find the information quickly. In one month, nearly 17 million students use the Internet and spend only 8 seconds viewing a website to determine whether it contains the information what they are interested in. Whenever we implement a new system, it is made so that it contains minimum or no flaws with respect to an existing system. We make the system so that it has minimal disadvantages.

The now existing systems consist of following operations-

1) Manually Searching for each university.
2) Limited exposure to information.
3) No updated information.
4) Getting data from respective university websites.
5) Getting data from third party websites which barely consider the necessary parameters for the university searching tool.
6) Comparing them on our own.

Some studies on the existing platforms are as follows,

The paper presents a university search engine that incorporates several features tailored to meet the specific needs of university students, staff, and faculty members. The search engine provides relevant and reliable information about the university including course information, faculty research interests, and events [2].

The paper examines the effectiveness of university search engines in providing users with accurate and relevant search results. The authors conclude that while university search engines are generally effective, there is room for improvement in terms of search algorithms and user interface design [3].

The paper proposes a metadata model for university search engines that can effectively retrieve and present relevant information to users. The authors argue that metadata is an important factor in improving the accuracy and relevance of search results [4].

The paper explores the application of machine learning techniques to improve the performance of university search engines. The authors demonstrate that machine learning can effectively improve search accuracy and relevance [5].

The paper presents a university search engine with natural language processing capabilities that allows users to search for information using natural language queries. The authors demonstrate that this approach can improve user satisfaction and search accuracy [6].

Problems in the existing systems are that there is no recommendation system mechanism. The recommendation system is a very essential entity to provide list of universities to the users which is evaluated automatically by the program based on the input data provided by the user to the system. There are various sites which provide information of universities facility but there are very few who provide recommendations to their registered users. This portal is necessary to reduce the efforts of the students for getting an insight of which university student can apply for and have chance for getting an admit.

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This system analyses and generates the list of universities that a user can apply for based on his /her educational backgrounds. Another issue with the existing system is data redundancy which needs immediate attention. Storing the same field or values more than once unnecessarily is termed to as data redundancy. More problems are caused by data redundancy. One of the major problems is that storing values multiple times wastes space. Another problem is that when a value changes, multiple occurrences need to be updated and if we forget to change the data in any of the records the database would then have inconsistent data which can cause error.[7]

Other problems in existing system are browser compatibility issues, searching is hard and time consuming, do not cover variety of information that should be present in university information tool. Overall, the papers suggest that university search engines play an important role in providing relevant and reliable information to university students, staff, and faculty members. While current search engines are generally effective, there is still room for improvement in terms of search algorithms, metadata modelling, and user interface design. Additionally, incorporating machine learning and natural language processing techniques can further improve the accuracy and relevance of search results [8].

III. PROBLEM STATEMENT

There are various issues fetch by students while searching for various universities while taking admissions. Finding the right university is very challenging issue seen into the students. This challenge will be raised due to irrelevant and promotional information available on portal. So, it is necessary to develop a portal which will help students to get the more accurate and desired information from portal. So that there need to be a strong system for students which will give us more accurate and effective results.

IV. PROPOSED STATEMENT

By looking towards this problem statement, we have proposed a system which will help the students to get more information about the universities they are looking for. In proposed statement we are developing a web-based portal using HTML, CSS, JavaScript for frontend and Java and MySQL for backend and database. In this, interactive GUI is going to be develop for interaction of the user. So, the proposed system will help the student to get more appropriate university.

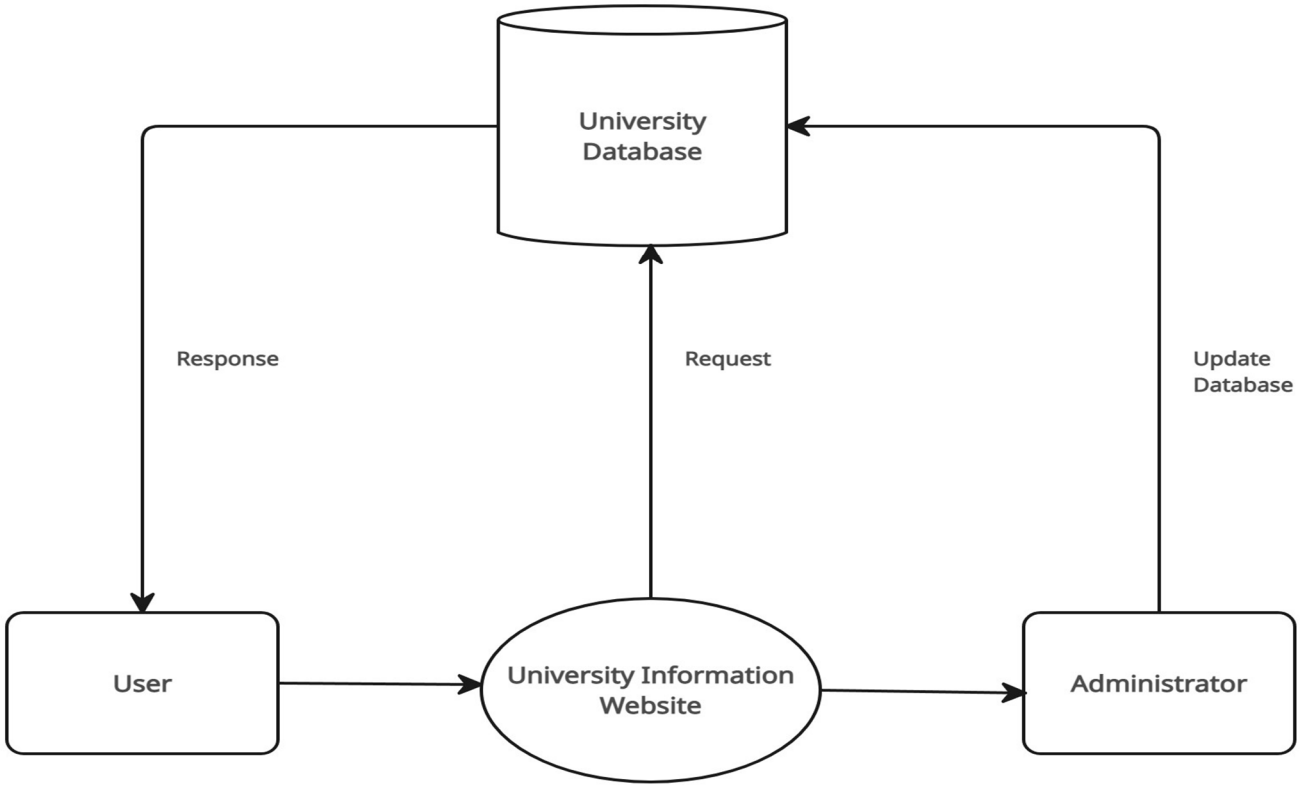


Fig. 2 System Architecture of Universities Information Portal

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The components of the system are as explained below:

1) *Universities Database:* The database is a repository for storing the universities details.
2) *Platform for Information:* The Website acts as an interface between student and database and helps to display information to the student.
3) *Administrator or Admin:* The admin manipulates the database according to needs as well as manage the users.
4) *User:* The user retrieves information from the website about universities manage their account.

V. DATA-FLOW DIAGRAM

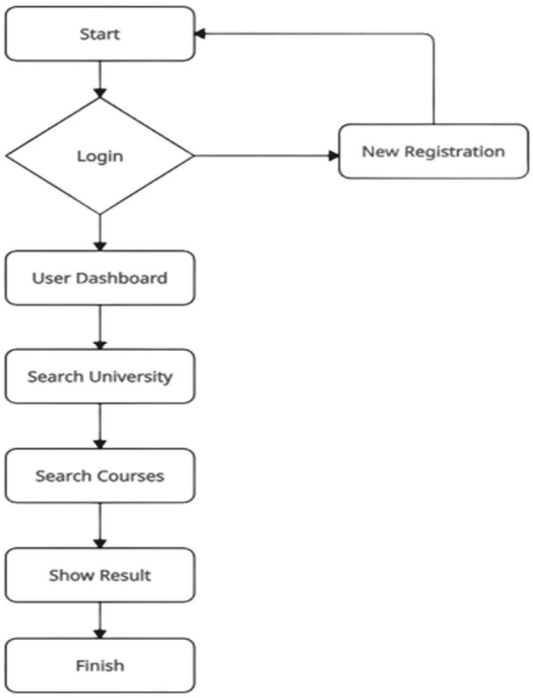


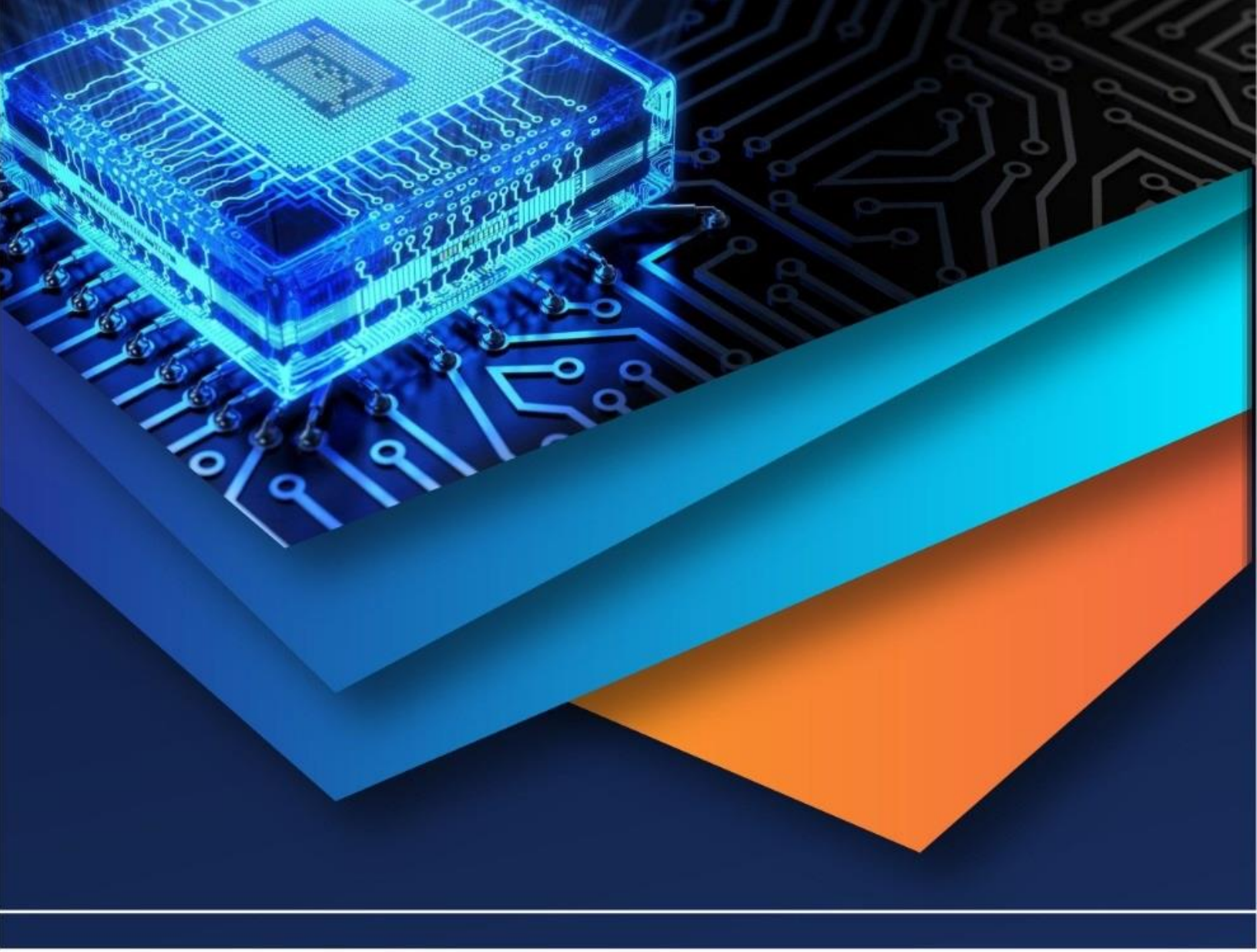
Fig. 3 Data-Flow diagram of proposed system

VI. CONCLUSION

As per the proposed system given it will help the student get information about various universities on single click. This proposed system may help to work out for finding the best university for their career. The proposed mechanism will evaluate with web so that it is accessible anywhere anytime. This system enables in automating the existing manual system. It reduces the man's effort that is required and provides accurate information. All the information is obtained at one place. It is better to have a Web Based system which is easy to access. So, it is to be conclude that the proposed system is feasible in all angles to helps the student to get an idea about the system.

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