FC RESEARCH GRANT FINDER

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1. Introduction

Research refers to collection of data and then analyze it and come to a conclusion about any existing work or to propose any new idea. It is mainly done by university lecturers and professors and students under them. But research work is expensive. It requires a lot of money to publish research in the journals, to collect data and analyze data using various technologies and methods. The researchers also need to provide salary to the research assistants during the period of research. It is not possible for the researcher to bear such expenses. So, they have to take funding from various organizations. Furthermore, research funding may lead to continuous industry-science relations by making researchers more willing to collaborate and hence increase transfer of technological knowledge from science to industry which fosters and accelerates industrial innovations. (Bogler, 1994) There are many organizations that provide fundings for research for their own benefits. Researchers need to go through respective organizations' website to look for research grants. They have to check whether the grants are relevant to their research. As a research-oriented university, the lecturers and professors of UTM also has to do research and look for funding. It is quite a hectic process, and it is not possible to look for each and every website for funding. So, a website that can gather all the grants provided by the funding organizations in a single system will be very beneficial for the lecturers and professors of UTM. For this reason, under the supervision of my supervisor, I plan to develop a system that will collect grant related information from the websites and store it in a single system using the technique of web scrapping. Through this, using a single system, the lecturers can find grants from different funding organisations. They can also filter and narrow their search and easily find the grants suitable for them. Web scrapping is the method of extracting data from a website. The language that can be used for web scrapping is Python. The libraries that can be used are BeautifulSoup, Scrapy Pandas etc. In this way, a system can be developed that will enable the researchers to find fundings easily.

2. Problem Background

Research grant is very important for a lecturer or a professor to start working on their research. Without research it is not possible to carry out research works properly. But it is very hard to find grants manually from various websites. It can be very time consuming and challenging because they have to search for grants that is suitable for their research.

The lecturers of Faculty of Computing do research in various fields. For that, they need to search for grants from multiple websites. This causes them to lose a lot of their time. They cannot also go through all the websites. So they miss on important funding opportunities. They cannot filter their interests, grant types, and find grants according to grant deadlines.

There is an existing Research Management website for the researchers of UTM, but it is completely manual, in that website researchers cannot search for grants according to their research topic, deadline, grant amount etc. There they have to choose from the available grants that are existing in the system. In this system, researchers cannot have access to the most recent information on funds that are available because of the lack of an automated mechanism to search for grants, which may result in loosing funding opportunities.

The researchers are not notified of any upcoming grants, so they have to visit the website every now and then to look for new grants. And the researchers cannot customize the grants according to their needs. Sometimes they have no option but to choose a grant that does not satisfy their requirements properly. So, it causes hindrance in the regular process of research and development of the university.

3. Project Aim

The aim of this project is to develop a system that helps the researchers of school of computing to search for grants according to their specific requirements.

4. Project Objectives

The objectives of the project are:

a) To study the requirements of the Research Grant Finder system in terms of its usability and functionality.

b) To propose the design of the system by selecting the appropriate design pattern, to design the database structure and the user interface.

c) To develop a system that meets all the requirements of the different category of users and that follows the selected design pattern and models.

d) To test the system using software testing tools to check if the system is able to carry out the functionalities and meet the requirements of the stakeholder.

5. Project Scope

The scopes of the project are:

The system will be a web-based system.

It will have login authentication.

The grant information will be extracted for educational purposes only.

The grant information will only be provided to authenticated users of the Faculty of Computing only.

The system will use web scrapping based on Python libraries.

An individual can only see his grant statistics related.

6. Project Importance

The system will assist the researchers in getting grants according to their requirements. Thus, the research process will be made more convenient. It will save them an ample amount of time. The researchers will get the most recent information about new upcoming grants through the system. The researchers will be able to filter the grant searching according to the type of grant he/she wants. A centralized system will be available to them, using which they can find the grants provided by various funding organizations. It will also be beneficial to the funding organizations, as their grant will be made more reachable to the various researchers. Overall, this system will provide better research opportunities and will benefit researchers, research organizations, and funding organizations to a great extent.

7. Report Organization

This chapter consists of the summary of the project, the problem statement, objectives, and scope of the project. Chapter 2 includes the literature review of the system. Chapter 3 consists of the methodology of the software development and the required hardware and software for this project. Chapter 4 consists of the requirement analysis of the system. And the coding and testing are discussed in chapter 5.