

1. Introduction

After centuries of revolution in terms of the industrial and education, it is to believe that the demands of knowledge and education is increase proportionally with the needs in industrial economics. Needless to say that, the requirement of education level for a person to involve as a part of the contributors in the industry need to be high and knowledgeable enough to handle all the task in each of the industry. Thus, it is undeniable that freshman have to undergo lessons and experience in Diploma level or Degree level or higher level of study to prepare themselves with various knowledge.

University therefore playing an important roles in assisting the industries to get professionals and providing knowledges to the young generations, which it is vital for a person to choose the right university to pursue their studies. It is the matter of fact that every different university have their own capabilities and what they are well known for. To support the statement, a person might hardly achieve high knowledge of computer skills if they pursue their interest in an university which are well known in culinary. Based on the statistic in studymalaysia.com, there are a total of 111 types of higher level education institutions including private university, public university, university college and foreign university.

Hence, a national centralized database for these institution is a need to be developed and with the name of RoboAdvisor, it could build a convenient way for students to decide and choose wisely in pursuing their studies in a particular sector of industry.

2. Research Statement

Without having doubt, students will have difficulties in comparing and deciding the institutions they preferable to pursue their study. This issued happened as our nation lack of a centralized database platform for these higher level study institutions to collect various information such as courses details, co-curriculum activities, University informations and achievement, alumnus experience and et cetera. Without the database, a visualization tools to provide simple view to the third party hence could not be achieved.

With all these fragmented information which only share between their own institution, it is hard to provide the most accurate data to the third party in making accurate decisions for pursuing their studies.

3. Research Question

- a. What is the quantity and the quality of the sources can be collected from every university?
- b. What will be the main focus of the students when making decision?
- c. How to retrieve information from institutions that insist in disclosing their information?

4. Research Aims

To gather the majority of universities information and create a platform by providing simple and convenient way in comparing every universities.

5. Research Objectives

- a. To create a software which act as a centralized database to store every information related to the universities.
- b. To provide a convenient, efficient and accurate visualisation results to the third party.
- c. To create a forum for every expression and opinion for the student anonymously.

6. Research Scope

In this project, RoboAdvisor will be developed and during the development phase, several works and scope in this research will be focused as follow:

a. Dataset

The dataset will be used in this project are the set of data of every important information in every higher level study institutions. Each of the project mates will be scraping every aspect of the informations about the institutions.

b. Algorithm

During the project, we will be scraping the data from the universities websites into a csv file format, then data cleaning process will be processed before developing and store into a centralized database. Then, algorithms for data analysis will be used to analyse different information between the universities when bringing out live to the public.

c. Programming Language

The programming language that we will be using are HTML, CSS, JavaScript, Python, Php and Laravel. HTML, CSS and JavaScript will be used to assist in building user interface; Php and Laravel will be used to build the database; Python will be used to scrap data and analysis.

7. Research Significance

The finding of this research study will be reflected to the community and beneficial for the education community such as the universities, parents and the students as this research will be seeking linked relationship and collaboration towards each of the universities. Student will also find easy and convenient to do their own finding as well for their further study.

8. Research Timeline

Mile Stone	Mile Stone Goal	Deadline
Web Scrapping	Scrap all the related information of Malaysia Universities and produce output in .csv format.	
Database development	Push all the scraped information into one central database with auto search and filter functions.	
Database UI/UX development	Development of UI/UX for the database to produce information needed and data flowchart.	
Dashboard Design and Development	Design and development of the dashboard of the RoboAdvisor AI-based system.	
Live feeds scraping	News scraping for latest development/trend	

9. Project Structure

