

ANALYSIS AND PREDICTION OF CAREER CHOICE USING EXPERT SYSTEM

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ABSTRACT

Most of the users are confused while selecting their streams according to their capability. User can select career choice based on their IQ. The main aim of the project is to help user for choosing their career option. System helps the user to select their career choice according to their interest in particular field. The IQ test brings an easy interesting working environment, more clarity in presenting appropriate information to the user and also it gives faster access and retrieval of information from the database. Depending on their scores in the aptitude tests containing questions from different streams, the system suggests the student which stream is best suited for him/her, as their scores indicate their level of interest, skill and knowledge in that particular stream. This system is developed particularly to cater to the needs of the students of SSC and HSC and consists of tests containing questions from the different subjects and streams.

1. Introduction

In the current scenario, most of the students in our country usually don't have the proper guidance to decide which major they should pursue for their further education. The choice is usually made based on what the majority is pursuing. However, since each person is uniquely gifted and not everybody has the capability to pursue what the others are doing, students usually tend to struggle a lot in their further studies. This leads to various psychological issues for the students as they try to fit into a stream which is incompatible with their proficiency and passions.

Although there are various systems in the form of applications and modules which

Provide the students with the opportunity to take a free Aptitude test, there is nothing which provides the students with the explicit guidance or advise as to which stream they are supposed to pursue. With the help of this System, students can not only appear for an Aptitude Test, but at the end of the test, along with the marks, the students are also suggested with the career or academic major which is best suitable for them according to their proficiency.

Motivation

A proper undergraduate course selection is an important decision in the life of higher secondary students. Every year thousands of high school students in every country face the challenge of choosing their most suitable university/college course. It is a difficult and timeconsuming task because many factors contribute towards taking the accurate decision like student interest, marks in high school, financial status of the parents etc. Many students should approach some human experts who has knowledge about the colleges and courses. With today's increasing number of colleges and courses the details provided by a human expert may not be fully sufficient to judge whether a college/course will suit for a particular student. Artificial intelligence methods like Expert Systems (ES) can help and save time in this domain because an ES can provide a fast expert advice based on the knowledge from its knowledge base component.

The programs that attempt to emulate the behaviour of human experts are known as Expert Systems. These are usually confined to a specific field. Expert System is a branch of Artificial Intelligence that attempt to replace human experts. Expert systems can either support decision makers or completely replace them. Career guidance is a domain which involves human experts such as counsellors who provide advice to select appropriate career paths for individuals after considering the personnel information and available options. This

facility is vital to any higher education institute, because students tend to consult experts in determining their career paths. This activity helps out when students are not confident of their future career and when having problems in determining what is best for them out of the available options.

Problem Definition

The career choice decision is also difficult not just because of the range of career options available to an individual in the current environment, but having an adequate understanding of a career without getting into it. Too often, only after a person has made sustainable commitments in time, energy, and money or has cut off other opportunities by taking steps to enter a career, does he or she find that it is not what was expected or wanted. With the help of this System, students can not only appear for an Aptitude Test, but at the end of the test, along with the marks, the students are also suggested with the career or academic major which is best suitable for them according to their proficiency.

Objective

The objective of the proposed system is to provide proper guidance to the user by conducting the test and displaying the result on the basis of their performance.

Scope

Since the proposed project is targeted only for the HSC and SSC students, there still remains a wide scope for growth. In the future more functionality can be added which will facilitate the stream analysis of students from various different streams and majors. Some of the streams which can be added in the future are Engineering, medical, MBA etc. For example an engineering student can give an online aptitude test to determine which specialization he/she should pursue his BE degree in example Civil Mechanical, CSE etc.

Literature Survey

According to Gladwell (2008) and Colvin (2008) often it is difficult to set apart an outstanding performance merely because of talent or simply because of hard training. Talented people as a rule show high results immediately in few kinds of activity, but often only in single direction or genre. Online Aptitude Test is a well-known way of evaluating an individual's capability to execute well in given circumstances. Organizations use a common device as a pre-employment need. It is done by placing together a framework of assessments that evaluate different places such as reasoning, troubleshooting, and language potential. Based on what place an individual is implementing for, online aptitude test can be common or industry-specific. For example, IT roles may have tested items that evaluate your information in on-line. Is this test worth the try? Job mismatch is one of the sad reasons why workers step down from their roles. After having gone through the career process, and after a few months or even several weeks on the job, an individual may understand that, it is not quite the job; he or she was looking for. The financial commitment of your energy and effort, sources, and training actions all go to spend in such circumstances. Online aptitude test is valuable, to both the worker and the company. Personal objectives, working style, options, and social skills are all part of what the assessments can evaluate. In order to get precise information and test outcome, solutions to concerns must be sincere without much thought on what your response may indicate. The more sincere you are with your solutions, the more precise your outcomes will be, and the more likely you are to get the job that suits your abilities, strong points, and options.

Through such test, test facilities can help you find the job you have always desired, the job in which you will most likely succeed. Testing facilities have an extensive data source of possible careers, which will then be used to produce which ones coordinate your options the best. They may not be doubling precise, but they will definitely be able to inform you in selecting which career you should take. For more details, below are some pros and cons of online aptitude testing: Advantages You are free from the stress of having to go to test places. The test can be done online, and can be taken in the comfort of your home-or wherever you are. All you need is a pc and Internet access. The outcomes can be produced right away. You can also get appropriate sources and details on the careers that coordinate your test outcomes.

Prediction and Analysis for Students Marks Based on Decision Tree Algorithm[3]: Using decision tree algorithm C4.5 to establish a classification rule and an analysis- forecasting model for students' marks. Describing how the analysis-forecasting result can be used to find out the factors which can affect students' marks, so some negative learning habits or behaviours of students can be revealed and corrected in time. And the teaching effect of the teacher can be checked, the teaching management can also be assisted. The effectiveness and correctness of analysis and forecasting model and classification for students' marks based on decision tree algorithm C4.5 has been examined.

Proposed System

The proposed system provides an easy and accurate way to search which career they are good at. This system, questions can be stored and retrieved easily. The system checks the answer by matching the pre-defined answers in database and user's answer. The marking criteria is decided by the admin and stored in the system for reference. Admin can add question

based on group, main stream and sub stream. Question can be of level 1 and level 2. If the candidate scores good marks at particular stream, system will suggest the user in which stream they are good at. Admin can add or delete questions from the system. The results of each user are stored in the database and can view the result accordingly.

System Architecture

The architecture of our proposed system is depicted in below figure. The system uses html, java-script, SQL server. Besides that, the application will help to reduce time being wasted, leading to a higher learning productivity in class. In this system it may provide aptitude test for student after attempting this test the proper result will be shown, based on this result students may analyze what will be the perfect career choice.

PROPOSEDSYSTEM ARCHITECTURE

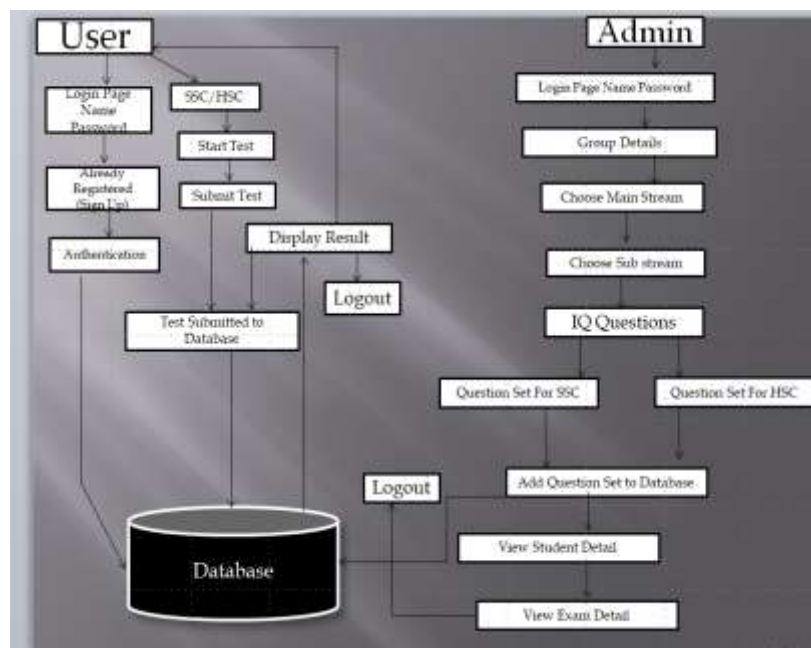


Fig: System Architecture

CONCLUSION

In this paper, there is a provision where students will have a platform, to test their skills in different streams to see what they actually excel in. We will try to develop a system that will be free from errors, developed with much care and at the same time more efficient and less time consuming. The positive point of our website is that it will guide students to select a more appropriate stream depending on their scores in the aptitude tests containing questions from different streams. Thus the system suggests the students which stream is best suited for him/her, as their scores indicate their level of interest, skill and knowledge in that particular stream. The important thing is that this system can be used in schools, colleges, coaching and institutes, can also be implemented in different organizations that conduct regular exams. Also provision is provided for future developments in the system i.e., more modules could be added to the system. This online system will be approved and implemented soon.

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