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STUDENT CAREER SYSTEM USING MACHINE LEARNING

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ABSTRACT

93% of the students aged 14 to 21 were aware of just seven career options though there are more than 250 different types of job options available in India. Around 85% of students are concerned about which option to choose for higher education and 92% don't get any career-related guidance from their schools. India has seen a massive rise in cases of depression and anxiety for people aged between 15 to 29 years Parents tried to exert influence over their choice of career or course, with 69% saying their parents tried to influence their choice of university. In 2015 alone, 1.5 million engineers graduated from roughly 3,500 odd engineering colleges across India 94% of engineering graduates are not fit for hiring. Only 1.7 % of engineers have the skills needed to work in new-age jobs. 60 % of faculty doesn't talk about the application of concepts in the industry. In this research, we are going to implement the web system for student career. In this study, with the help of flask, MySQL, pycharm, python we are going to create web application. In this, user should register to the system and gives demo test. On the basis of test result, with the help of machine learning prediction should be given as an output.

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I. INTRODUCTION

Universities as education providers understand the importance of addressing student satisfaction. Research shows that overall student satisfaction heavily depends on student satisfaction with their course and satisfaction with the course has an influence on student retention [1, 2]. Carter and Yeo [3] defined student satisfaction as a measure of student contentment with a course which is maintained from first year to graduation and beyond. According to Elliot and Healy [4], student satisfaction is enhanced when actual academic performance meets or exceeds student expectations. So, universities need to understand the students' expectations in order to motivate them to achieve their goals [5].

We all know that nowadays the competition goes on increasing day by day, choosing a career is also one of the important tasks of today's generation as the world is getting more technical. This issues mostly happens with the students that what their interest lies in. Every parent wants to see their children engineer or doctor but nobody asks what the child interested for, also the parents are worried about the future of their child. So this software helps both student and their parents. It helps the student to know where his/her actual interest lies in, which subject he has to choose that provides the best result of his future. We are trying to guide the student by taking him through a series of test that will give them the idea about how to start the career by telling them what subject they will choose so that this will be beneficial for them and what they will do further to get the best result.

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Methodologies like KNN, Neurals Networks, K- means clustering, D-Tree and many other advanced algorithms are applied in the fields of data and compute some data which is helpful to predict the right careers. The professions of uni-graduate students have been analyzed by Campagna ets al [3].

They understand by the databases of the students. The datum comprises of important data such as admission recordings academic records, grades. Based on the amount of courses, exams, semesters and exam deadlines, and the best student's is calculated who takes all the necessary courses and exams on time. K-means is used to for clustering to find the same patterns in the dataset.

II. PROBLEM STATEMENT

10th & 12th-grade students are usually unclear about their career path as there are so many new fields of profession every day. Our System wants to help its students understand the direction map of what they are good at in what they are studying to existing career options.
At some, we realize that we must need to decide our career path. So this software not only helps the student but also the institution to manage the counseling procedure by minimizing the paperwork which reducing the carbon footprint on the environment and at the same time also minimizing the time factor.

- This will also help the student in selecting a branch in more interesting and not like the colleges are offering.
- If the student is fulfilling the criteria, he/she will be eligible to take the counseling and he will get the information regarding the college or university in which he can apply. This will enhance the scope for the students in their future.

III. LITERATURE SURVEY

[1] Sarath Tomy and Eric Pardede, the model is implemented as a software application using text mining and data analytics to assist students in the better selection and management of subjects with respect to their anticipated careers. The application connects course, skills and career by analyzing the data gathered from educational environments and career advertisements and identifies any mismatch between the skills required by the job market and the skills acquired through the university curriculum. The application is developed based on the fact that student satisfaction is supported when students understand the connections between what they study at university and how this can lead to their desired career. To evaluate the effectiveness of the model and the application, a survey is conducted evaluating its functionalities from the perspective of the prime beneficiary of university education: students. Our goal is to get feedback from learners who use the Map My Career application with actual tasks. The results of the study showed that students found this tool beneficial in improving academic preparedness, academic workload management, core skill development, and graduate employability, thereby student satisfaction with the course.

[2] Ying Cao, Lei Zhan, Aimed at the practical requirements of advice for current students, combined with artificial intelligence expert system technology and college students career-counseling work, we provided a web-based career counseling expert system for college students. The system consists of the basic intelligence career counseling, career counseling solutions management, auxiliary decision-making, information management, evaluation management and so on. The system can obtain the relevant information automatically from visitors, determine their professional problems and then propose some solutions and recommendations. The system is based on the Agent technology to achieve the Java development of environment.

[3] Abdul Azis, YuniSugiarti, One of the most important roles in the education system is to prepare young people for their future lives, which include preparation for their careers. SyarifHidayatullah State Islamic University Jakarta has graduated many graduates with various skills, but often alumni have difficulty in getting the appropriate job in accordance with the knowledge that has been obtained during the study. For that, the University provides career information provider services for alumni. But in its development, career information provided by the University is global, less appropriate, less effective and efficient, and the opportunity is narrow, that can be caused by the lack of a special career system provided each program for students. Therefore, android-based mobile applications need to be created new system innovations to answer the needs of alumni and provide the best career opportunities. The developed system will consist of native apps installed on Android Mobile that can be easily accessed on mobile phone and a dashboard apps that will serve as the management of the content. This mobile application has job vacancy programs, scholarship program, training program, IT project, and tracer study

[4] YennyDesnelita, KasmanRukun, This paper explains how intelligent decisionmaking systems (IDSS) student career selection in accordance with their own potential. Intelligent decision-making systems combine concepts and models from various disciplines. This study describes and explains the normative model of student decision-making in order to know their own potential through interests, ability, knowledge and competencies as well as other factors that support students' self-improvement which are indicators of career selection. This study uses the nature of human decision making, the use of heuristics and knowledgebased decision rules using certainty factor (CF). In the final part of the study, the findings obtained were the student's decision in determining the career choice certainty factor that was in accordance with the chosen workplace.

[5] Kartikey Joshi, Amit Kumar Goel, This system will help nowadays youth to decide which career path is best for their future that brings out the best results if they choose that prescribed career. This will help in improving the performance of the student and also motivate their interest so that they will be focused on their targeted career. This system is based on a test that a student has to perform and depend on the answers that are provided by the student, it will generate a summarized result. The main aim of this system is to provide an overview of the Artificial Intelligence techniques that we used to predict the

performance of the student. This system will also be focusing on the way we are using prediction algorithms to identify attributes in student data. Using this system proved to be beneficial for the students, Educational Institutions and educators also.

[6] Noriko Uosaki, Kousuke Mouri, This paper describes our continuous study in which we have aimed to support international students' job hunting in Japan with our developed career support system. Our previous evaluation revealed three agendas in our system. Reflecting its result, we have improved it by implementing epub-based eBook called AETEL. Evaluation of our new system is scheduled to be conducted in 2016 spring. It is expected to support international students' job hunting process more powerfully than the previous one.

[7] Ashutosh Shankhdhar, Akash Agrawal, Select the right career is an important task and there are many new career options or opportunities that are increased day by day, so it is quite difficult to choose an appropriate career. According to the CSIR, there is about forty percent of students who are confused and results in a wrong selection of career. Thus, the productivity of students reduces because of wrong selection. Therefore, this is an essential aspect to choose the correct career at a perfect age to overcome the consequences which are happened due to the wrong decision. This web application would help students who are facing problem to select a course for their career. To find the student's performance with the help of analytics. This web application would help the student to choose career option based on their personality trait, interest and their capacity to take up the course and also provide best colleges as per their locality, fee structure.

IV. BLOCK DIAGRAM

System Architecture-

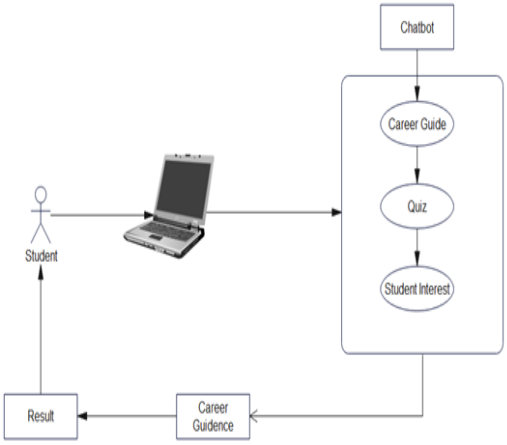

Fig 1. System architecture

Description:

1. The whole architecture is made by PyQT library used in python language. PyQT library gives all the necessary stuff related to GUI design. PyQT provides us display screen, buttons and so on. So, In this way PyQT helps us in design GUI.

2. After designing of GUI, another task is to authenticate valid user for operating application. To deal with this task, we are using MySQL database to store data of username and password and through this, user can authenticate easily.

3. Another task is to find out loan defaulters as applicable, non-applicable and overall analysis by using csv files and machine learning algorithms.

4. In this system we detect the loan defaulters with the help of machine learning technique.

Here provide the module for detecting loan defaulters using user data.

V. CONCLUSIONS

Based on understanding career information as a need for planning and career selection using criteria of knowledge ability, skills and competencies well as self-potential (interests-talents), which utilize the relevance of Intelligent Decision Support System (IDSS) in supporting career selection planning and decisions for college students.
The proposed career system predict the right career on the basis of giving academic records, personality traits, aptitude test and also consider their field of interest for this student giving a test and give some details about their grades and hobbies then the system will process the data and match with the perfect career option as per their capabilities. This web application worked as career counsellor which predicts career as per given test and record.

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