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Personality Evaluation and CV Analysis

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Abstract: ***Human personality has played a major role in an in our life as well as in the development of any organization. One of the ways to judge a human personality is by using standard questionnaires or by analyzing the Curriculum Vitae (CV). Traditionally, recruiters manually filter or shortlist a candidate's CV as per their requirements. In this paper, we present a system that automates the eligibility check and aptitude evaluation of a candidate in a recruitment process. To meet this, we need an online application which is developed for the analysis of aptitude or personality test and candidate's CV. The system analyzes professional eligibility based on the uploaded CV. The system employs a machine learning approach. The output of our system gives a decision for candidate recommendation. Further, the resulting scores help in evaluating the qualities in the candidates by analyzing the scores obtained in different areas. The graphical analysis of the performance of any candidate makes it easier to evaluate his/her personality and helpful in analyzing the CV properly. Thus, the system provides a helping hand for the recruitment process so that the candidate's CV will be shortlisted and the fair decision will be made.***
Keywords: Curriculum Vitae, Resume, Candidate, Java, Programming, Software, Analysis, Machine Learning.

I. INTRODUCTION

As far as employment is considered, selecting the right candidate for the recruitment process from a vast pool of candidates has been a fundamental issue. Conducting personality and various technical eligibility evaluation tests, interviews, and group discussions have been traditional techniques[1]. Due to inception of social media, much more important information about employees is exposed to their online handles. Generally, such information is unnoticed by the recruiters. Aptitude test followed by the interview is traditional practices for the recruitment process. These traditional practices are very much time-consuming, and may result in unfair choices of candidate[2]. As compared to traditional recruitment process, if an online selection process is conducted, then a fair selection of the candidate is possible. Personality is the most important factor which reflects an individual, which keeps on varying. Tackling them is a tedious task for which we have implemented an approach to identify the personality and also provide with the recommendation. In this paper, we propose a machine learning based method to check a candidate's aptitude and personality score. The personality of the candidate would be identified by using two metrics, first is personality test and second CV analysis[3]. The administrator is responsible to design, update or drop the questions and has the complete control to customize the aptitude/personality quest. As per organization requirements, Further, three categories of questions are added in the aptitude test which includes quantitative, verbal and logical type questions. After the aptitude test, the personality test is carried out so that candidate's personality would be tested. The decision can be made on the basis of the test outcome[4]. Finally, the score of the test is displayed and the decision of the candidate is made. The result of CV analysis is used for candidate selection as per organization needs. Recommendation using machine learning techniques have been used for the analysis of the CV. In literature, various evaluation tools have been used. The recommendation usually involves the use of various filters. Content and Collaboration are among them. Based on the above survey technique we state some of the limitations. The impact of manual interviews and the resumes over HR has kept on increasing in recent years. It is very important to come up with a solution that can shorten or fasten the HR department work[5]. Therefore a system has been implemented that recommends the candidates CV. Traditional forms of recruitment typically involve job seekers filling out physical resumes and giving interviews with the surge in applicants lately, the number of candidates tends to overwhelm the employers. The proposed automated candidate grading system utilizes machine learning algorithms to build the models which test them.

II. CURRENT METHODOLOGY

In our paper, we propose personality evaluation and CV analysis using machine learning algorithm. This system provides with an expert workforce for the organization which will help the HR department to select the right candidate for the particular job profile. In our society intelligence is highly appreciated. If you have a high IQ, you have a better chance of being successful at school and professional life. Generally, for prediction of personality, psychometric questions are used. The proposed system is developed as a web application wherein the admin is first needed to login with proper credentials followed by which they can add the questions and can also modify them[6].

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For each question, four options along with the correct answer is stored in the database. The candidate will register her/himself with all the details and will also fill their own CV details into the system. After the test given by the candidates, the scores are stored in databases. The next test is of personality test. There is a common myth which says that IQ tests measure intelligence. What an IQ test actually measures is not actual intelligence, but a person's capacity for intelligence. In this test various situations will be encountered by the candidate ranging from strongly agree to disagree, which is provided as a drop-down list.

III. PROPOSED SYSTEM

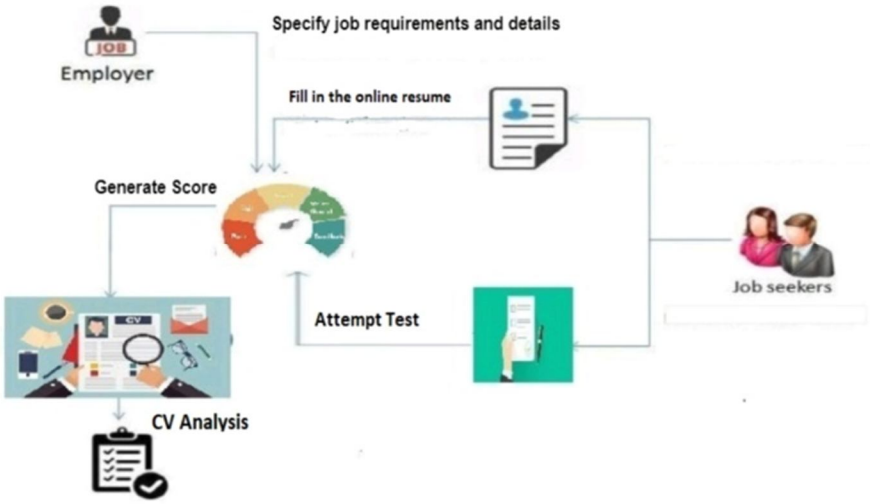

Fig 1. Architecture of the System

The architectural workflow in a sequential process. Workflow shows the interaction among the entities such as Job seekers, Admin and CV Analysis etc.

Below, we explain the three entities in detail:

A. Admin Module

Following are the tasks of the admin module
Authority to login.
Conduct aptitude and personality tests.
Add questions for the test along with alternatives.
Along with correct option store the data.
Add, modify or delete the questions as per requirement.
View candidate results.

B. Candidate Module

Following are the tasks of the candidate module:-
At first glance, register to the system.
Login as and when required.
Attend the test.
Fill online CV.
View the test score.

C. CV Analysis

The CV analysis module consists of:-
CV data to be stored in database.
Analyze the CV.

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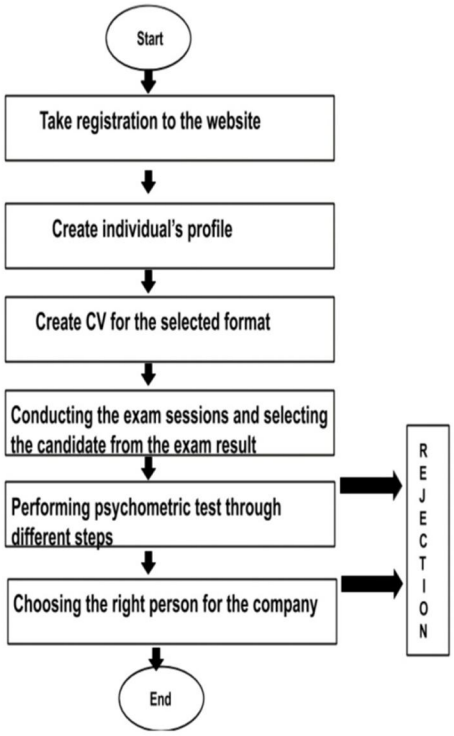

Fig 2. Flow Chart of the System

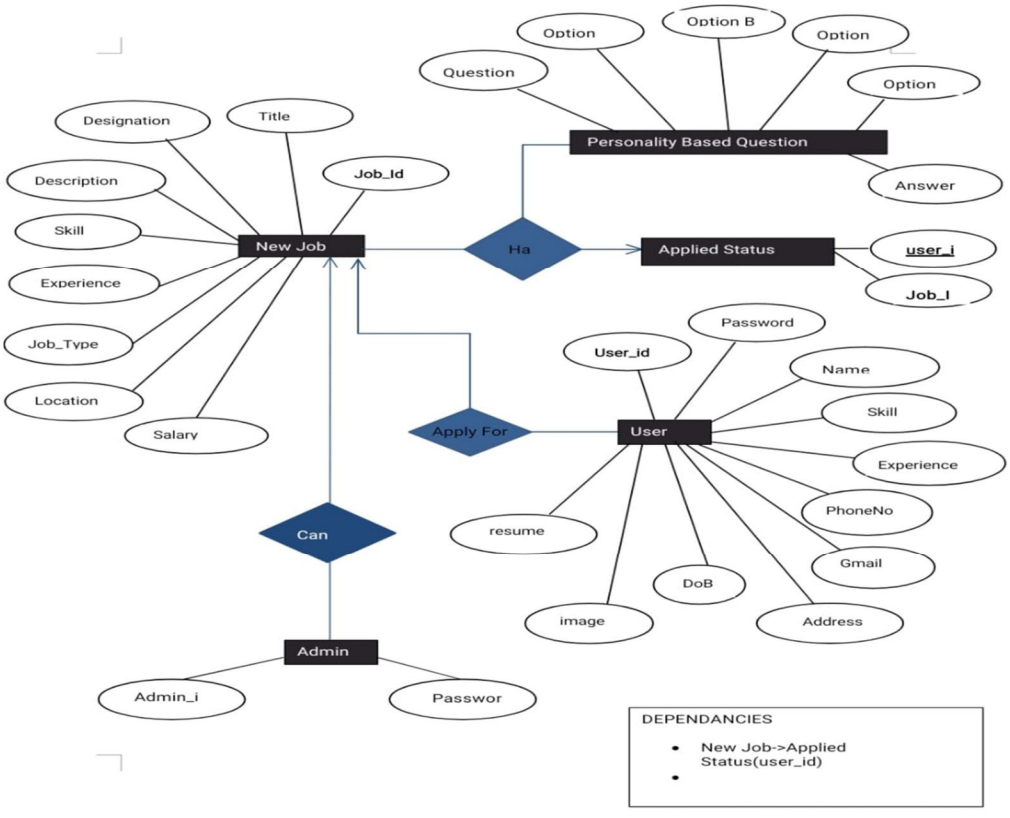

Fig 3. ER Diagram of the System

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IV. RESULT

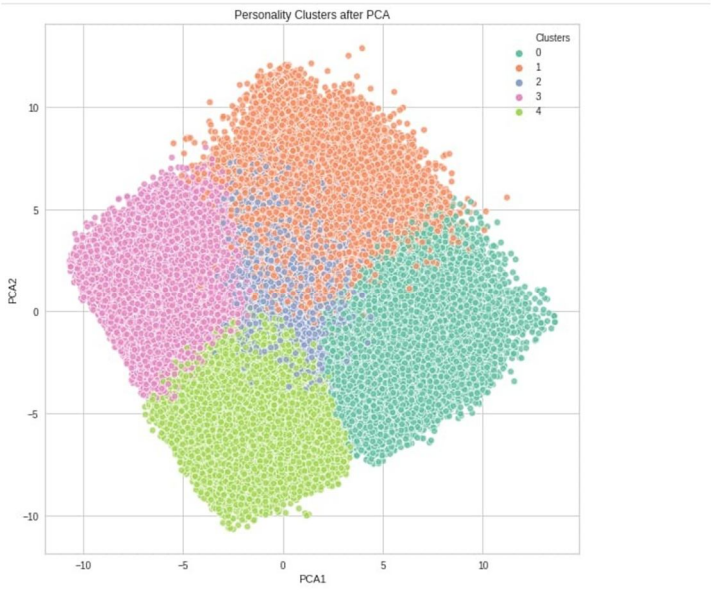

Fig 4. Personality Cluster Analysis

V. CONCLUSION

We have presented in this paper, the prediction of human personality by using standard questionnaires that is provided by the HR Department according to the job selection criteria. Candidates fill an online Curriculum Vitae (CV) which can be later on viewed by the Admin. Candidates are provided with separate set keys for attempting the personality based tests. CV analysis is performed using the CV filled by the candidate in the website[7]. A machine learning approach has been used in analysis of data through content and collaborative filtering. Further the test scores help in deciding the qualities in the candidates. Thus, the CV is shortlisted for the recruitment process and a fair and appropriate decision is made by HR department. Also, data visualization model determines the overall performance of the students based on various factors. This analysis helps the Admin department to calculate the proficiency of candidates accurately.

Further, we can modify the existing system to perform sentiment analysis of social media data. Many more classification algorithms of machine learning can be integrated to provide much better functionalities. Further, the efficiency and performance of the application can be tested and analyzed[8]. Many more classification algorithms of machine learning can be integrated to provide much better functionalities. Further, the efficiency and performance of the application can be tested and analyzed.

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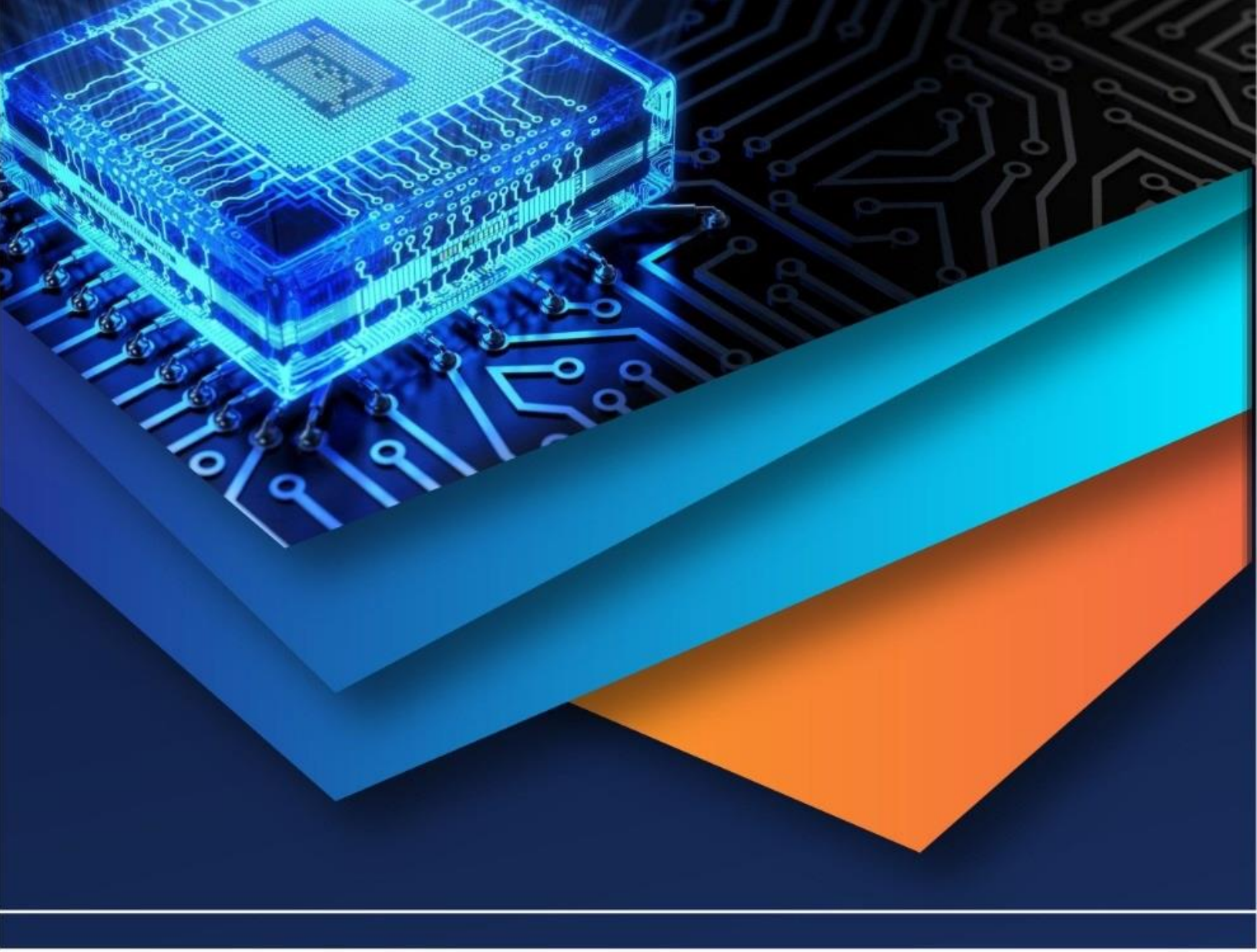

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