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RESEARCH ARTICLE OPEN ACCESS

Persona and Personality identifier using Machine Learning

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ABSTRACT-
The company globally hires 3.32 billion human beings everywhere in the world as of 2022. Selecting those human beings is a large challenge. Companies now no longer search for the ability set preferred for the unique process position however additionally their personality and finally their character.Persona is what makes the personnel gifted and a hit of their expert in addition to non-public life. So the organizations need to understand and apprehend the personality and character trends of the personnel. With the surge in populace the opposition has elevated and as a result there are numerous candidates for a selected process, so how does the organization pick the pleasant suit for the publication simply with the aid of studying the CV, therefore the personality evaluation is needed to pick the proper candidate. Going via the CVs manually and identifying the personality is hard therefore evaluation of the personality the usage of gadget mastering is a superb and time-saving substitute.
Keywords: personality, persona, people, job, company, analysis, machine learning.

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I. INTRODUCTION

The word ‘persona’ is the root word in Latin which means a mask used by an actor. It is that quality of a person that he shows to the world that he has. Persona offers us a specific manner of questioning and speaking approximately how customers behave, how they think, what they want to accomplish, and why. This is mostly through a CV. Thus analysis of persona helps know whether a person is suitable for a particular job or not.It shows whether a person can effectively guide, influence, communicate and collaborate with others. The essential element of recruitment is job application personal information, previous job or project experience, and most importantly CV. Companies often receive a lot of applications for job openings and have a dedicated team to screen and select qualified candidates. It is sort of not possible for human beings to manually undergo all of the CVs after which to examine and choose them. Hiring the right person at the right place is not an easy task as some might not be skilled enough or some might not have the right personality to fit in. Thus we propose a way in which shortlisting of candidates gets smooth and quicker by analysis of the persona prediction.

The Big Five version additionally referred to as the OCEAN version and Five-Factor Model (FFM) changed into evolved withinside the early Nineteen Eighties in keeping with many mental theories. Some words are used to describe the individual when statistical analysis is applied to personality survey data, and these words accurately represent the person's overall character or personality.

*Openness/Openness: To Experience includes aspects such as imagination, sensitivity, attention, a taste for diversity, curiosity, and is open to new ideas and innovation.

* Conscientiousness: This trait is used to describe a person's care and earnestness. It is a quality that describes how a person perceives their atmosphere.

* Extraversion: It's a quality that shows how the best applicant can get along with people, that is, how good his/her social adeptness are. It's about good communication skills.

* Agreeableness: It is the quality that analyzes individual behavior based on generosity, empathy, willingness to cooperate, and adaptability to people.

* Neuroticism: This trait usually describes a person with mood swings and extreme expressiveness.

II. LITERATURE SURVEY

(Atharva Kulkarni, Tanuj Shankarwar, Siddharth Thorat, **Personality Prediction Via CV Analysis using Machine Learning,** International Journal of Engineering Research & Technology (IJERT), Vol. 10 Issue 09, September-2021)

Abstract: The corporate world today focuses not only on the skills of a potential employee, but also on his personality. Personality is what helps a person to be successful in both professional and personal life.
Inference : With the help of various algorithms the prediction of personality was done. The proposed system can be used by various companies in order to streamline the recruitment process considering the personality of potential candidates.

(Devesh Agarwal, Mr. M. Karthikeyan, **PERSONALITY PREDICTION USING MACHINE LEARNING,** International Research Journal of Modernization in Engineering Technology and Science (IRJMETS), Volume:04/Issue:04/April-2022)

Abstract : Every person on the planet is unique and carries a unique personality type. personality-based communication is highly effective in increasing awareness and attractiveness of products and services.
Inference : This personality prediction model can be used in e-commerce sites, competitive exams, psychometric tests, matrimonial sites, government sectors like army, navy, air force.

(Ms. C. Ashwini, Sk Shahid Ali, Arnab Rooj, **PERSONALITY PREDICTION SYSTEM USING MACHINE LEARNING,** Journal of Emerging Technologies and Innovative Research (JETIR), June 2019, Volume 6, Issue 6)

Abstract : With the development of social networks, a wide variety of methods have been developed to determine the personality of consumers based on their social activities and language use practices. Inference : Several personality models are used for personality prediction, such as Big Five Personality, MBTI (MyersBriggs Type Indicator) or DISC (Dominance Influence Steadiness Consciousness).
(Stachl, C., Pargent, F., Hilbert, S., Harari, G. M., Schoedel, R., Vaid, S., Gosling, S. D., & Bühner, M. (2020), **Personality Research and Assessment in the Era of Machine Learning,** European Journal of Personality, per.2257.)

Abstract : Machine learning models require specialized methodological training that considers issues specific to this type of modeling.
Inference : In this paper, we have discussed a number of important methodological challenges and highlighted some potential pitfalls to consider when applying ML models.

(Ms. L. Ancy Geoferla, A. Deepthi Sree, Murugesan Meena, Namburi Charmika, Lakshmi Nila, **PERSONALITY PREDICTION SYSTEM,** International Journal of Modern Agriculture, Volume 10 Issue 3, 2021)

Abstract : A model of job characteristics based on the concept of modern job design supports human resource management, thereby providing more job opportunities.
Inference : The model user machine learning algorithms for the prediction of personality. The system would reduce the HR department's workload and would assist the HR department with finding the best choice for the position.

(Allan Robey, Kaushik Shukla, Kashish Agarwal, Keval Joshi, Professor Shalmali Joshi, **Personality Prediction System through CV Analysis,** International Research Journal of Engineering and Technology (IRJET), Volume: 06 Issue: 02 | Feb 2019)

Abstract : The proposed system tries to propose a plan for integrating the Job Characteristics Model into the E-HR system for finding a new model of efficient operation. In this project, we present a set of techniques that streamline and streamline the entire recruitment process.
Inference : In this project, an organization-oriented recruitment system that would help the HR department in selecting a suitable candidate for a specific job profile was introduced.

Software and Tools Used:
1. HTML
2. CSS
3. JAVASCRIPT
4. FLASK FRAMEWORK
5. PYTHON
6.MYSQL
7. Windows 10 (32-bit and 64-bit)

III. PROPOSED WORK

The proposed work focuses on implementing an Online Website for candidates and companies. The basic function of this website is to help candidates to know persona traits easily and also allow companies to know the candidates

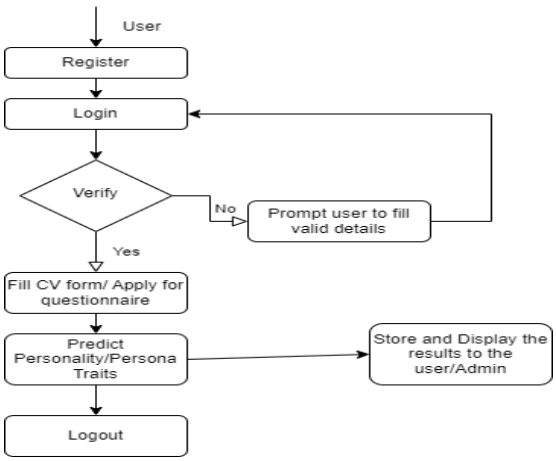
personality and skills for a particular job. The OCEAN Model has been used here for implementation.

The system is implemented by using HTML and CSS for the frontend , which creates a dynamic UI which is easy to understand and can be navigated without any hassle.Here, Python's Flask framework has been used acts as the server side for managing the databases and session tracking related to candidates , companies, their details, the various jobs posted, candidates CV's etc. An object-oriented programming language, i.e, JavaScript is used to enable dynamic interactivity so that the user can interact with the web pages without having to reload every time. The whole framework has been developed using the Windows 10 operating system. Here the system is divided into two parts.

1. Candidates
2. Companies

3.1 Candidates:

Candidates can register by giving necessary details like Name, email and password etc. After successful registration, the candidate can log in by giving their username and password. The candidate can see the jobs lists and can apply for particular jobs. They can also check their persona traits by answering the questions.



(Activity diagram for candidates)

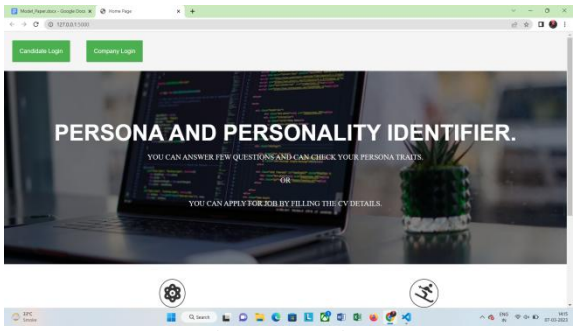
3.2 Companies:

Company representatives can register by giving necessary details like Name, company name, email and password etc. After successful registration, the representative will be able to login to the account using the email and password. The company representative can post new job positions and can see the list of the candidates applied for the job positions. Apart from that the representative will be able to see the CV of the candidates and the analysis done by our model of the candidates CV's.

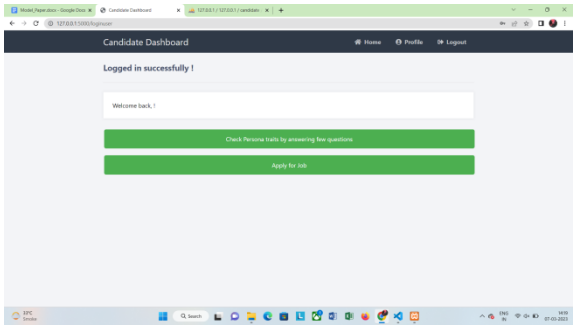
(Flow Chart for Company representative)

3.3 User Interface:

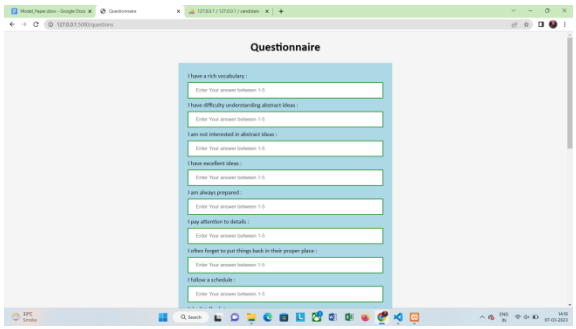
We have designed a simple and user-friendly interface. By using this interface, candidates can login and check their persona traits and can apply for jobs, companies can post jobs and can see the candidates that have applied for the job, and can see the analysis of the candidates CV.



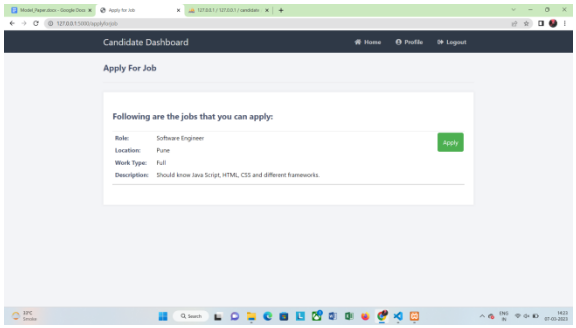
(Home Page)



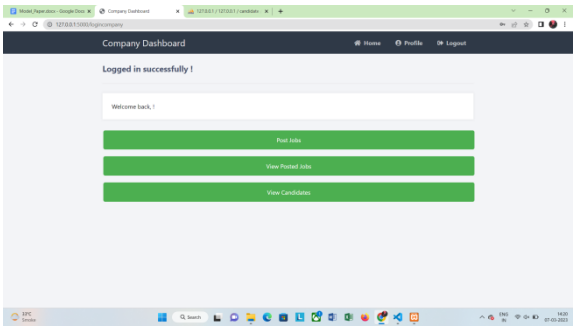
(Candidate Dashboard)



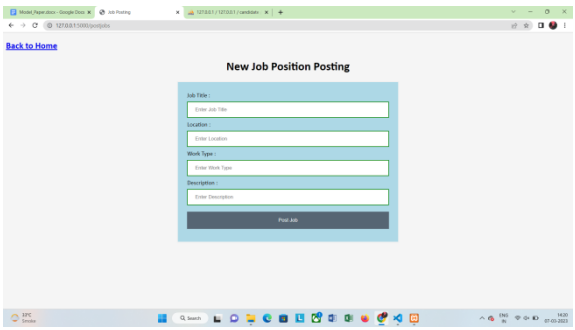
(Questionnaire form for candidate)



(Candidate can apply for specific job)



(Company Dashboard)



(Job posting from the company side)

This paper puts forward a study on persona analysis using questionnaires and CV analysis by machine learning. It will use the OCEAN model for the classification of people. Logistic Regression will be used for the same. The aim of the project is to create a functional website that enables persona analysis. The future scope can include the analysis of C.V in any format using natural language processing techniques to parse and understand the user uploaded C.V. The future scope can also include allowing the employer to set a questionnaire for a particular job post asking questions relevant to that job. It can also further be trained to include neurodiverse people in the workforce, which will give a way to neurodiverse work places. Further enhancements to the current condition of personality prediction can be made by extending the objective language, applying more appropriate algorithms or preprocessing strategies to accomplish higher accuracy.

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