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ijircce@gmail.com



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SP³ Robot for Recruitment System Using AI

Prajakta Bhadale¹, Pranali Hivarkar², Shreyas Mane³, Piyusha Bhawe⁴, Prof. G. N. Rukare⁵

Department of Computer Engineering, NESGOI, Pune, India^{1,2,3,4,5}

ABSTRACT: In the last ten years, there has been a significant increase in the amount of well-executed recruitment and employee retention in global markets with high levels of competition. For better management and productivity when dealing with employees of generation Y and Z, managers need to be emotionally intelligent. Humanoid robot research prototypes have been around for a long time. A humanoid robot's various applications in an innovative artificially based environment are described in our project. A commercial recruitment robot based on AI was created and implemented by us. In every company, SP³ serves as a digital consultant during the interview process. The various functions include serving as a concierge for brand-new guests, instructing AI, and answering questions in open and project-specific domains. In addition to the robot's speech and image recognition system, our own AI technologies are incorporated into it. We started giving SP³ access to social collaboration tools so that it could become a social robot.

KEYWORDS: SP³Robot, Recruitment System, Python, Speech Conversion, Text Conversion

I. INTRODUCTION

The purpose of this paper is to present the various points of view of various scholars and authors regarding the SP³ recruitment procedure. Advertisements for jobs on websites and other social media platforms are not the only means by which SP³ recruits: rather, it is a perplexing peculiarity. As a result, gaining a better understanding of the scope of the SP³ recruitment process will be made easier by analyzing the various points of view presented by academics and authors. The procedure in question is to select the appropriate applicants for the appropriate positions. In order to provide an overview of the various SP³ recruitment process types and selection quality, this paper framed two major themes for a literature review.

Involving effective enlistment methodologies would assist the association in enrolling representatives and laborers with high potential and would try and help in executing ability the board techniques in an upgraded way. Since the 1990s, fundamental shifts in recruitment procedures have been observed. Due to the expansion of the global economy, which has raised the demand for skilled potential employees and workers in an organization, online recruitment has increased dramatically. This examination paper examines the commitment of SP³ enrollment for a particular work in an organization or Any association based on the fluctuated view of various HR proficient.

When compared to external recruitment, internal recruitment or promotion is much simpler because it requires less time and money. Senior managers and the organization are well aware of the abilities, knowledge, and skills of their subordinates; As a result, it performs better than external recruitment. The advancement of junior representatives can urge and spur them to perform better. External recruitment, on the other hand, is helpful in bringing in new ideas and talent to the organization.

II. RELATED WORK

In existing system whenever the company is conducting interviews, process involves that taking the jobseeker details, conducting written test, correcting or evaluating the written test papers etc. This entire process is done manually. So, the disadvantages of this process are:

1. It takes more manpower
2. It takes much time
3. Sometime the results may be wrong in this approach

There is much debate by industry professionals on the best ways to improve the interview process. And by improve, we mean attract and make better hires. One theory is that harder job interviews actually lead to better job matches - but is this true? It turns out, yes. Candidates who go through a rigorous interview process often find that the company places a high value on finding employees who are a good match for both the position and the company culture.

A job interview is simply a meeting between a job candidate and interviewer to determine if that applicant is the right person for the job. Interviews are a core pillar of recruitment and typically have the largest influence over which candidate is selected for the job. Job interviews can vary significantly depending on the company, industry, and position. Typically, they involve meeting with the recruiter, hiring manager, and other managers working with the candidate, fellow team members, and senior leadership. Therefore, the job interview process is the start to finish workflow that organizations use to screen and meet with candidates to determine suitability for the job. It's much more involved and systematic than a single conversation or phone call and leverages multiple layers of interviewing to refine decision making. Each company will likely have its own job interview process, which will likely vary depending on the role and seniority.

III. PROPOSED METHODOLOGY

Finding potential candidates to fill open positions within an organization is known as recruitment. It is a method of selecting candidates based on their abilities and attitude, which is necessary for an organization to achieve its goals. Enrollment process is a course of recognizing the work opening, investigating the work necessities, exploring applications, screening, shortlisting and choosing the right competitor. Humanoid robots are proficient Help robots worked to imitate human mothin and connection. As with all service robots, they add value by automating tasks to save money and increase productivity. A relatively new type of professional service robot is the humanoid robot.

As SP3, we created a model for a candidate's interview with an Emotionally Intelligent Robotic System in our proposed system. SP3 depends on mix of brain science based selling conduct model, man-made consciousness, picture handling and delicate figuring techniques.[6] Most existing ways to deal with individual's recruiting depend fundamentally on the screening as well as psychometric tests for selling conduct assessment. The interview process is constrained by time constraints, human factor and subjectivity, and uniformity. The three main components of the interview system used for job interviews are as follows: a system for dialogue, speech recognition, and text-to-speech technology. The candidate's text-to-speech engine answers the candidate's questions, while speech recognition processes the candidate's audio responses and turns them into text.

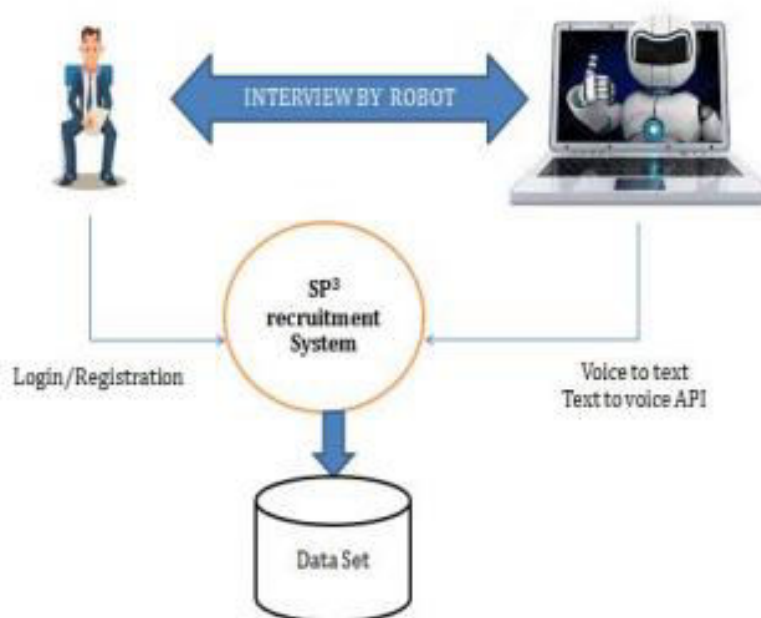


Fig 1. Proposed System Architecture

IV. WORKING MODULE

The interview system is used for conducting job interview consisting of three main components: text- to-speech engine, speech recognition and dialogue system. The textto-speech engine is responsible for vocalizing the text questions to the candidate, while the speech recognition capture the audio responses of the candidate and convert them into text.

```
flutter: SelectedQuestions: [3, 6, 10, 5, 9, 7, 8, 15, 14, 12]
flutter: Selected Questions ID: [3, 6, 10, 5, 9, 7, 8, 15, 14, 12]
flutter: submittedAnswersDirectory does not exists
flutter: Question : Who is the founder of C Language?
flutter: Question : What is the use of computer vision in AI?
flutter: Question : What is the platform?
flutter: Question : What are the four pillars of java?
flutter: Question : What is a pointer in C?
flutter: Question : What is PEP 8?
flutter: Question : What is an object?
flutter: Question : What is C++?
flutter: Question : What is a class?
flutter: Question : Which programming language is used for AI?
flutter: Answer : Computer vision is a field of Artificial Intelligence that is used to train the computers so that the
world such as images. Hence, computer vision uses AI technology to solve complex problems such as image processing, ob
flutter: Answer : Abstraction, Encapsulation, Polymorphism and Inheritance
flutter: Answer : Dennis Ritchie is known as the founder of the c language.
flutter: Answer : A platform is the hardware or software environment in which a piece of software is executed. There ar
hardware-based. Java provides the software-based platform.
```

Fig 2: Random Question Generation

The dialogue system is responsible for managing the job interview dialogue with the candidate. Besides the human voice and speech recognition and emotion tracking capacities, the SP³ robot is interacting (interviewing) the candidate in a very interacting manner with rich human-like characteristics like gestures and emotive facial data. During conducting the interview, video capturing and cognitive responses of the candidate will be input in the emotional profiling and cognitive profiling components for profiling and benchmarking.

V. WORKING SCREEN SHOT

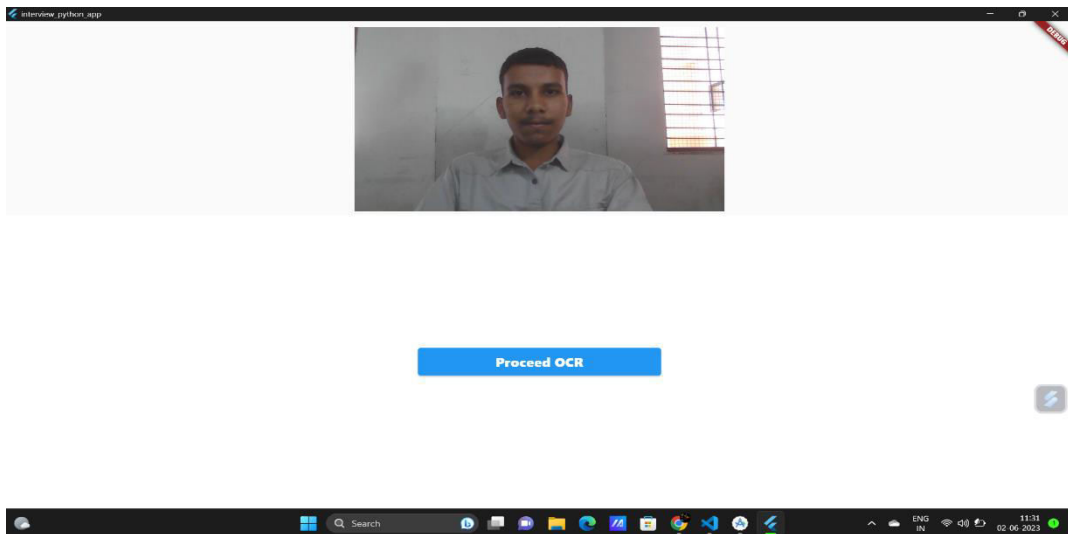
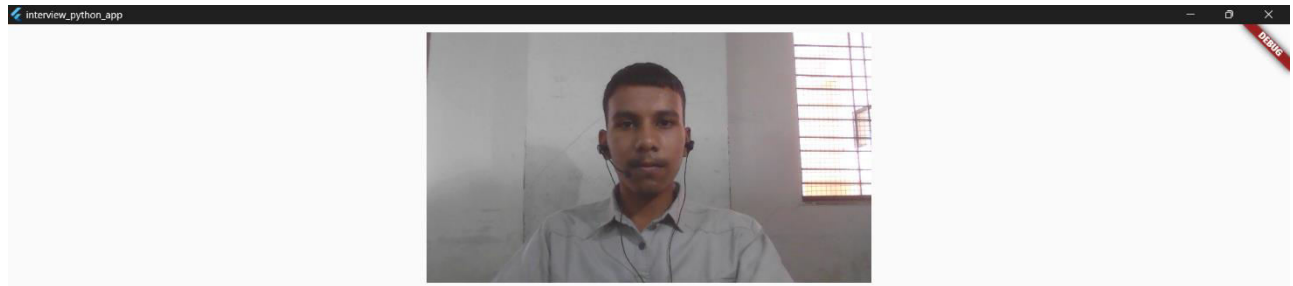


Fig 3: Interview Home Screen



Question 10/10 : Which programming language is used for AI?



Fig 4: Interview Running

VI. CONCLUSION

The relevant literature review can be summarized as indicating that technology is used in the SP3 recruitment process to attract and select qualified applicants. It has been seen that the SP3 enrollment process includes stages like looking through the gig organizer, surveying the competitors, short-posting applicants and an official choices made by the selecting directors. Additionally, there are issues with alignment, discrimination, and diversity, as well as an increased number of unsuitable job applicants. There is a need for additional research in this area due to the lack of literature on the clear process of SP3 recruitment and correct procedures, despite the fact that sufficient sources of literature exist on the advantages and disadvantages of the E-recruitment process. We have created an integrated SP3 recruitment system that is geared toward businesses or government agencies and automates the candidate evaluation and pre-screening process.

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