Analysis and Development in Select Smart System

Lalithashree S
Dept. of Computer Science and Engineering
Rajarajeswari Collage of engineering
Bangalore India

Lokesh
Dept. of Computer Science and Engineering
Rajarajeswari Collage of engineering
Bangalore India

Shashidhar V
Dept. of Computer Science and Engineering
Rajarajeswari Collage of engineering
Bangalore India

Abstract— **Modern enterprise applications and products are being developed, using the same and the complementary technologies to enable full stack development. This makes the applications easier in terms of maintenance and during addition of new features. The current issue in the industry is to develop a system or application and resources with complete set of knowledge of similar technologies. The proposed project is to develop an application using full stack tools, technologies, and thereby creating expertise of full stack among the students. Select smart is a online interviewing platform which is carried out using JavaScript and Sql as a database. The scope of this project is to provide the authority to the organization to conduct the online interview process. This platform consist of four users. Namely, administrator, recruiter, evaluator and candidate. The application developed is evaluated in terms of features, performance and reusability. This also involves development of micro services and API, which has to connect and collaborate with other applications and systems.**

Keywords-Application Programming Interface, Feature or Plug-in.

I. INTRODUCTION

Select smart is a system which particularly deals with development of an application using the full stack tools and technologies. This system includes a platform where online interview process will be carried out.

Select smart application is built over technologies involving Asp.net, NodeJS, AngularJS and Sql. The entire stalk of technology is based on JavaScript and C#. JavaScript and C# are the essential building block for adding dynamic features to your website. The JavaScript language is an implementation of the underlying ECMA Script specification. Many frameworks on the frontend (Angular.js, Node.js, and Npm) and on the backend side (Asp.net) is being used.

Online interviewing platforms not only help companies' transform the hiring process but also bring efficiencies in identifying the right talent. These platforms incorporate video interviews to aid employers and candidates further enhancing the user experience.

Traditional interviewing system is cutthroat process. In traditional interviewing system, company or the organization has to go to the college campus and conduct the interview process. It is a long and time consuming procedure. And also this process generally leaves the companies with a good, but not great employee at a significant financial investment. That's because traditional interviewing companies come with a variety of flaws that make them less than ideal for modern day businesses.

Online interviewing platforms would be more cost effective, immediacy and it is a expedited hiring process. Candidates can conveniently access interview process, no matter where they are, if they have an internet enabled device and connection, and then they can easily take the interview. This could be a solution for the cons of hiring process.

The main objective of the proposed system is to increase hiring of efficient candidates for an organization at a significant financial investment. And also developing this application which deals with online interview process using those techniques which expertise a student as a full stack developer.

II. LITERATURE SURVEY

People who have previously worked on traditional interviewing system find that the system does not meet all the necessary requirements of organization. The major problem with the system is not hiring the efficient candidate with the required skills with respect to the financial significance.

"An Automatic Online Recruitment System based on Exploiting Multiple Semantic Resources and Concept-relatedness Measures". Here they propose an automatic online recruitment system that utilizes multiple semantic resources in strive to highlight and capture the semantic aspects of both job posts and job-seeker Resumes. The proposed system employs NLP pre-processing techniques to recognize and take out the lists of candidate concepts from job posts and resumes. In addition, it make use of statistical concept-relatedness measures to enhance and enlarge the lists of candidate concepts with entities i.e. concepts that were not initially recognized by the employed semantic resources.

"Human Judgments in Hiring Decisions Based on Online Social Network Profiles" .One recent trend is firms using online social networks as a part of the job hiring process, here they scout the key criteria and profile components that affecter cognition about a user. Our results

are based on datasets comprises of reports of recognition who actually took part in a task of evaluating candidates. Participants venture their Face book profiles and CVs, to be analyzed by other participants who provided a complete report about their job-suitability.

"Scaling Personality Traits of Interviewees in an Online Job Interview by Vocal Spectrum and Facial Cue Analysis". In this research we provide an ICT based solution to identify the individuality type characteristics of an interview and categorizing according to the levels exhibited in respective personality characteristic through facial utterance recognition techniques along with articulated analysis to match with the individuality characteristics of Passion, Cooperation, Confidence and spiritual Stability for IT job positions where high level of communication need to be done when performing the task.

"Recruiting Software Architecture Using User Generated Data". It narrate that for automatization of a big array of data of unorganized user produced information complete ontology of domain "recruiting" should be evolved; model of social media user in the context of his professional skills and refine the methodology for analyzing big data "Business-to-Employee Cooperation Support through Online Job Interviews". Early systems provided the potential to collect resumes online. However, they unsuccessful to solve hiring process problems and dispense meaningful workflow. Within this extent, this paper proposes online interviews as a tool that permit recruiters to gather structured interview information and appraise cultural fit, while at the same time streamlining the interview process and minimizing interview biases. Online interviews cannot replace the conventional face-to-face interviews, but can definitely provide the means to help recruiters and hiring managers with interviewing challenges.

III. SYSTEM ARCHITECTURE

System design is the method of defining the architecture, modules, interfaces, and data for a system to satisfy specified requirements. System design could be seen as the application of system theory to product development.

There are four user levels for Select smart interviewing platform. Namely,

- Administrator
- Recruiter
- Candidate
- Evaluator

Administrator: It is a user level where one of the organization people will be the admin. Here the user will be having the powers like adding the recruiter, adding and assigning evaluator, adding candidate, evaluating interview and hire or reject candidate.

Recruiter: Recruiter is a user level which will be added by the administrator. Here the recruiter will be able to add and assign the evaluator, add the candidate, evaluate interview and hire or reject the candidate.

Candidate: Candidates will be invited through their emails by sending the invitation for them to take the interview. Once the candidates receive mail, they visit the website and take the interview.

Evaluator: Evaluator is a level, where the evaluators will be added by either the admin or the recruiter. Once the candidates take the interview, evaluators will be assigned for the evaluation of the interview.

Data flow diagrams can be used to provide the end users an idea of stages in the system. It ultimately has an effect upon the structure of the whole system.

The figure 1 shows how the select smart system works. Initially, either one out of the four user levels will register and login into the website.

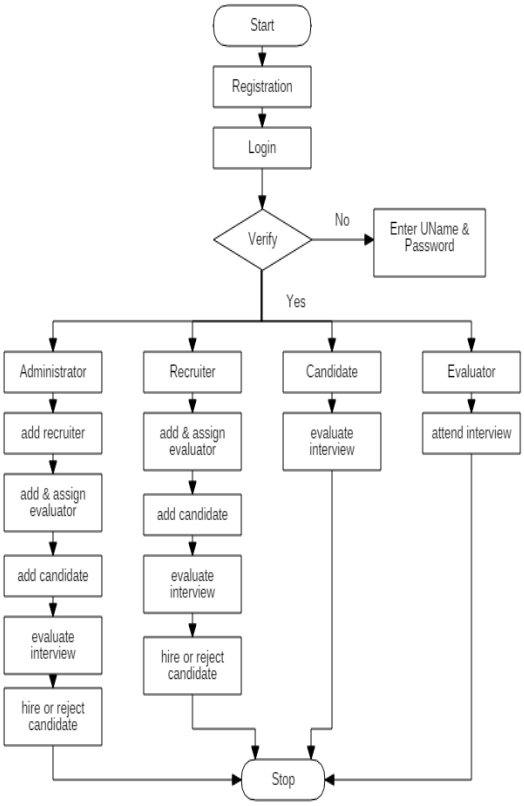

Figure 1: Architecture Diagram for Select Smart System

Admin as he is the main and the impartment user in the process , he will be associated with all the powers. Firstly he will be able to create the position in the My Position option. It includes name of the position, specialization, number of vacancies and the position description will be set.

After adding positions, next will be adding the questions, which can be added in the portal only or else by downloading the template of the file which consists of questions in it.

Inviting the candidates will be the next process. Initially candidates will be added either one by one or by downloading the template which consists of candidates list in it. Then the invitation is sent to all the candidates who are all added through email.

Once the candidate receive the mail, they will use the link attached in their mail's to attend the interview and after it finished , the evaluation process starts.

Evaluators will be added then to the portal and then they will be assigned for evaluating the respective candidate's interview. Finally with the help of the results report, the candidates will either be selected or rejected.

IV. MODULES

The Select Smart system has four modules, namely,

Module 1: Create Position
Module 2: Invite Candidates
Module 3: Evaluate Interview
Module 4: Hire or Reject

Create Position: This module involves creating the positions. It involves, creating the job title, adding job specialization, mentioning job description, setting the vacancy limit and preparing the interview questions.

Invite Candidates: Inviting Candidates modules deals with , initially adding the candidates, inviting the students to take the interview through sending mails to their respective mail id's , after which candidates will be attending the interview and then submit the interview and finally waiting for the results.

Evaluate Interview: This module starts with addition of the evaluators, assigning the candidates for the evaluators, and then the evaluators will do the evaluation of the interviews given by the candidates and finally once the evaluation is done, evaluator submits evaluation process.

Hire or Reject: This module takes care of hiring or rejecting the candidates from results of the interview. First the evaluation report will be viewed and reviewed. Later the eligible candidates will be hired and rest will be rejected.

V. IMPLEMENTATION

Implementation is one of the most crucial phases of the Software Development Life Cycle (SDLC). Specifically, it involves coding the system using a particular programming language and converting the design into an actual working system. This phase of the system is conducted with the idea that whatever is designed should be implemented; keeping in mind that it fulfils user requirements, objective and scope of the system. The implementation phase produces the solution to the user problem. The project is implemented as java application. The interface provided by this application is very user friendly.

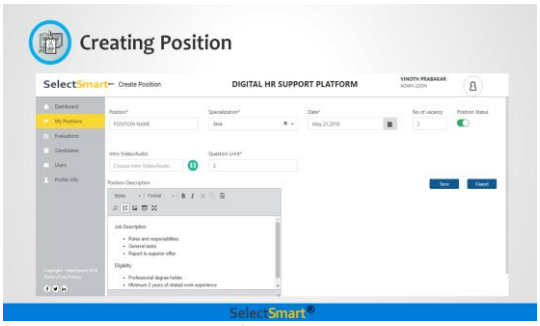

Figure 2: Creating Position

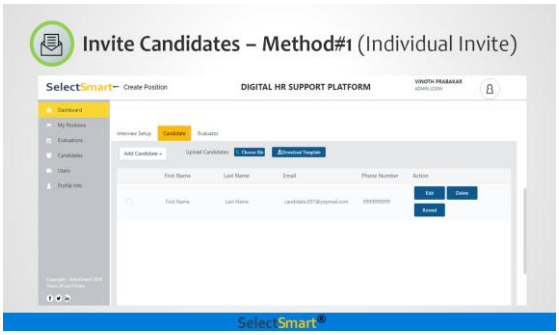

Figure 4: Inviting the Candidates (Method 1)

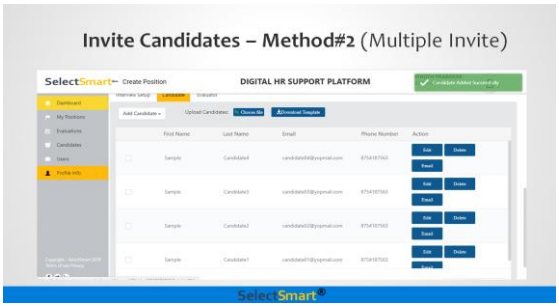

Figure 5: Inviting the Candidates (Method 2)

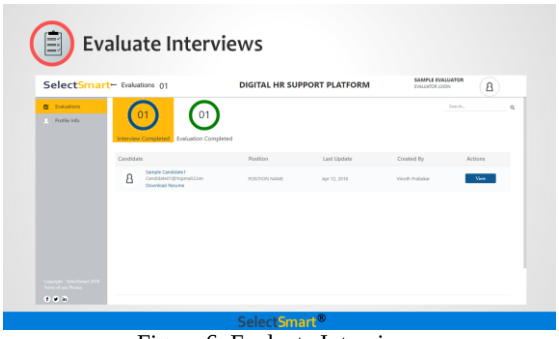

Figure 6: Evaluate Interviews

Figure 7: Hiring/ Rejecting

V. CONCLUSION AND FUTURE ENHANCEMENT

It could be concluded that the system is able to conduct the online interview process in a successful way and also the developer will be able to expertise as a full stack developer. Future work will be focused on implementing the same system with completely MEAN STACK based technologies.

REFERENCES

[1] "Field selection for job categorization and recommendation to social network users",EmmanuelMalherbe; MamadouDiaby; Mario Cataldi; Emmanuel Viennet; Marie-AudeAufaure, 2014 IEEE/ACM (ASONAM 2014)

[2] Vivek Kumar Sehgal; AkshayJagtiani; Meha Shah; Anupriya Sharma; ArpitJaiswal; Dhananjay Mehta,"Job Portal A Web Application for Geographically Distribute d MultipleClients", 2013 1st International Conference on Artificial Intelligence, Modelling and Simulation

[3] Bilgin Koşucu; Özlem Durmaz İncel, "Recruitment selection strategies for crowdsourced sensing", CemErsoy, 2012 20th Signal Processing and Communications Applications Conference (SIU)

[4] "Human judgments in hiring decisions based on online social networ kprofiles", YoramBachrach, 2015 IEEE International Conference on Data Science and Advanced Analytics (DSAA)

[5] Aseel B. Kmail; Mohammed Maree; Mohammed Belkhatir; Saadat M. Alhashmi,"An Automatic Online Recruitment System Based on Exp loiting MultipleSemantic Resources and Concept-Relatedness Measures", 2015 IEEE 27th International Conference on Tools with Artificial Intelligence (ICTAI)

[6] Scaling personality traits of interviewees in an online job interview byvocal spectrum and facial cue analysis",A. T. Rupasinghe; N. L. Gunawardena; S. Shujan; D. A. S. Atukorale, 2016 Sixteenth International Conference on Advances in ICT for Emerging Regions (ICTer)

[7] Technology Connectivity:A Tool for the Selection, Recruitment and Enrolment of Potential Students in South African Universities", J. F. Agwa-Ejon; A. Pradhan, 2017 Portland International Conference on Management of Engineering and Technology (PICMET)

[8] Ki-Young Shin; Jong-Hyeok Lee, "A job applicants resume verification method using a social network analysis Using Facebook like as linked in for a recruiting", 2017 11th International Conference on Software, Knowledge, Information Management and Applications (SKIMA).