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Job Matching System for the New Era Hiring

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Abstract: The Job Matching Systems are now working on the old parameters and Systems, which are not suitable for the growing skills and diverse knowledge of the skilled job seekers. The existing Systems play a keen role in evaluating the job seekers on the educational qualification and certificates but in the current trend, some young skilled people have not got a formal degree but still excel at their skill. So, our System aims at the opportunity seeking for this set of job seekers who would dedicate themselves to the work. We have two sets of parameters which are the old parameter which consists of the job seeker's educational qualification such as the Secondary Education certificate, 12th certificate, undergraduate, postgraduate and PhD, the second set of parameters are the projects they have accomplished, the languages they have been trained for completing their project, the repetitive usage of a particular skill and the work experience. These parameters are combined to create a perfect matrix and criteria to evaluate the job seekers.

***IndexTerms* – job-matching system, job-matching parameter, job-matching process**

I. INTRODUCTION

Job Matching Systems play a crucial game in the life of a job seeker as he/she is allowed to attend an interview or not is filtered by a System, and this System rates the job seekers on various parameters. These Systems are capable of designing many people's lives and are integrated into the life of each person. So, having a critical job matching System is crucial for all firms.
Normally, the job matching process in an online mode goes into 4 distinct stages. First step: is to collect the data of the job seeker by conducting a survey form on the job seeker's basic information and storing them in the database. Second step: is to collect the data on the job vacancies from multiple companies and group them into various categories. Third step: is to process the data and analyses the different patterns of hiring and suggesting job applications for the job seekers. Forth step: is to analyses the different job applications from the users and filter them. In the digital era, we have changed from collecting data, collecting job opportunities available and then suggesting all the jobs available to the job seekers. This process has been translated into the job seeker's interest here the job seekers are given a range of options based on the details the job seekers previously filled. Here, the systems are advanced enough to analyze the job seeker's subject of interest and recommend suitable job offers. Now we are going one step forward by creating a matrix of educational qualifications, work experience and projects done by the job seekers. This matrix along with other Systems will create a smooth and critical System that is capable of analyzing job seekers' interests and company interests. Systems like ranking, indexing, matching and code-crawling System.

II. RELATED SYSTEM

In this digital era of worldwide networking, job searching platforms give job seekers the opportunities to place a mark in different companies. Which gets you the best possible opportunities based on the qualification you have graduated and certifications achieved. These job matching Systems decides the job opportunity and offers the users get, so these Systems are critically designed for the best searches in this corporate jungle. The existing job matching System is as follows. Jobseeker Sourcing Systems: this System focuses on the prerequisites of the employer and aligns it with the qualifications of the job seeker and the nearest match is given the opportunity of attending the interview. This System is prominent for large or mass recruitment as these jobs require the most popular set of qualifications like python, java, C++ and many more. But the down sight of this System is that the less studied areas or less prominent job requisites are difficult. [1]. Filtering Systems: this System optimizes the jobseekers sourcing system-driven results. These systems require a highly qualified team of techies to design a system that analyses the user (job seeker) based on the details they have provided by the job seekers. But Systems must go through vigorous test cases and different situations analysis which needs an endless amount of research and experimentation for development. This type of system can only be developed by a large well-built company or a job-providing platform with the resources in hand.[1]
Recommendation Systems: The System does the reverse of the above two Systems. The previously described System sorts based on the company filtration but this System gives the user a chance of selecting which career he wants to choose with the qualification he/she is working or studying.[2] This gives the user liberty for the job selection and choosing the companies he/she would prefer to work in. Here the job searching platforms act as search engine optimization. [3] These systems are critical and should be updated to the current scenarios or would create problems like those mentioned in the reports by Miranda Bogen [8] and Shuo Zhang[9]. In a developing nation like India, there are many ways of approaching a company for a job, but the most prominent way is as follows: job searching platforms (like LinkedIn, Naukari and Indeed)[7], consultancies, campus placements and

references. In all these means the job seekers are evaluated on the degrees they have graduated and other educational certifications as a fresher, but there is a clause here the job seekers are evaluated on their book knowledge rather than giving prominence to their practical knowledge.[10] The existing parameters for a job matching platform are the description, job experiences, qualifications and other basic details of the users. As a result, there is less importance given to the work and skills they have developed and there is a shift in way of hiring in large MNCs where there are also giving a platform for the skilled people who haven't completed formal education but have a deeper understanding in their field of interest. The solution for this problem is been briefly explained in Proposed System.

III. Proposed System

Our job matching System is named WeConnect does all three Systems work into modules and give easy access for the employers to get recruits at a much faster pace. WeConnect System gives companies to use their proprietary filtering System. The working of the System is as described in figure 1.

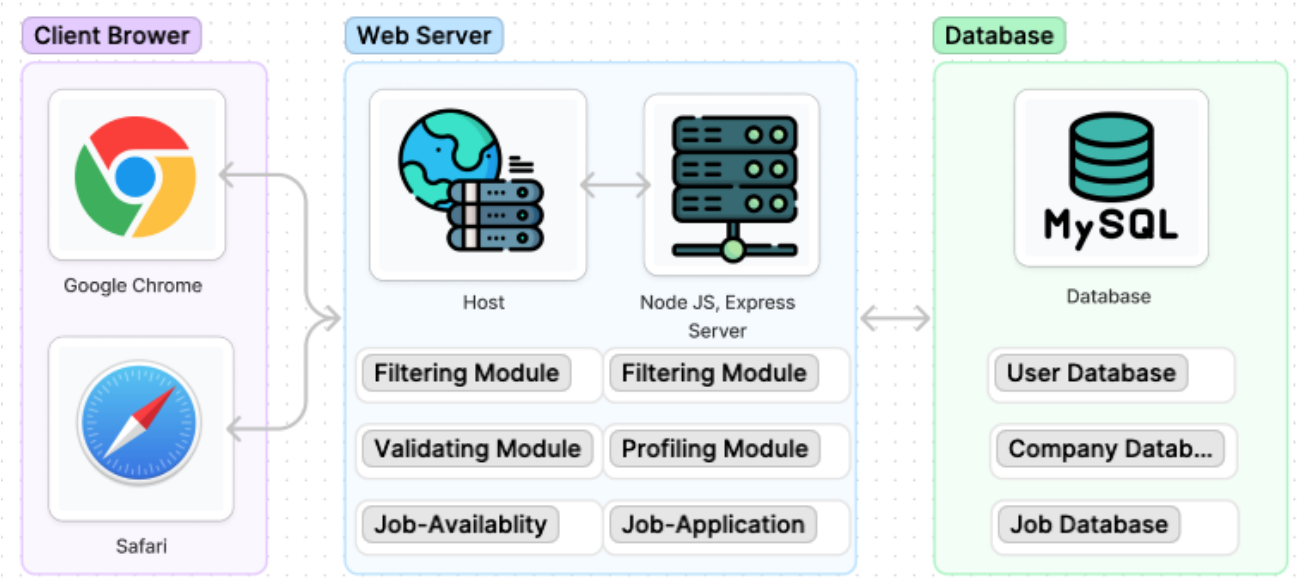

Fig. 1. architecture of weconnect

This System is simple and flexible, which is easy and faster to implement. A start-up for new job recruitment can also easily access the job Matching web portal. This System's current focus on Information Technology can be implemented in other fields. So, this System has different parameters for evaluating the users. WeConnect also gives importance to parameters such as projects they have completed and the skills required for them to develop them. Our System keeps the spotlight on the projects that they have completed as these are the basis for their future works.[6] This job-matching System along with an indexing and ranking System will optimize the job matching and will capable of predicting the person's skills and how to expertise them. An indexing system indexes the job seeker with the code developed by the job seeker and a ranking System can increase the ranks based on multiple factors like no. of views, no. of projects with the intersection of languages used and ranking based on categories in the area of expertise like electronics, Operating System development, game development and many other fields/categories. The system overview of our project is described in figure 2.

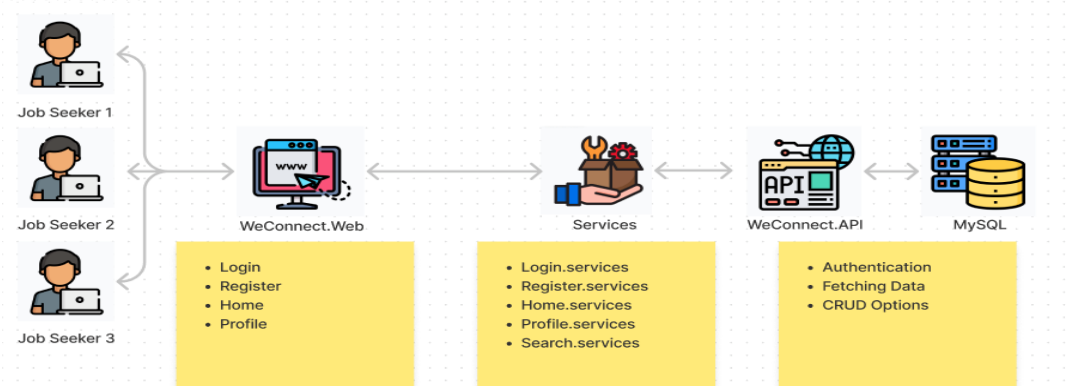

Fig. 2. system Interaction diagram

Our users get connected with us by the website, which contacts different services for different functions and these services go and communicate with API and MySQL Database. For the website frontend, we use Angular and for backend environment setup we use Express.js. Our future enhancement is to integrate deep learning [5] and create multiple models and views[4] So that we can have different models which support different situations.

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IV. Implementation

This is the outcome of our system. The screenshot as shown in figure 3 is the home screen of the job seeker.

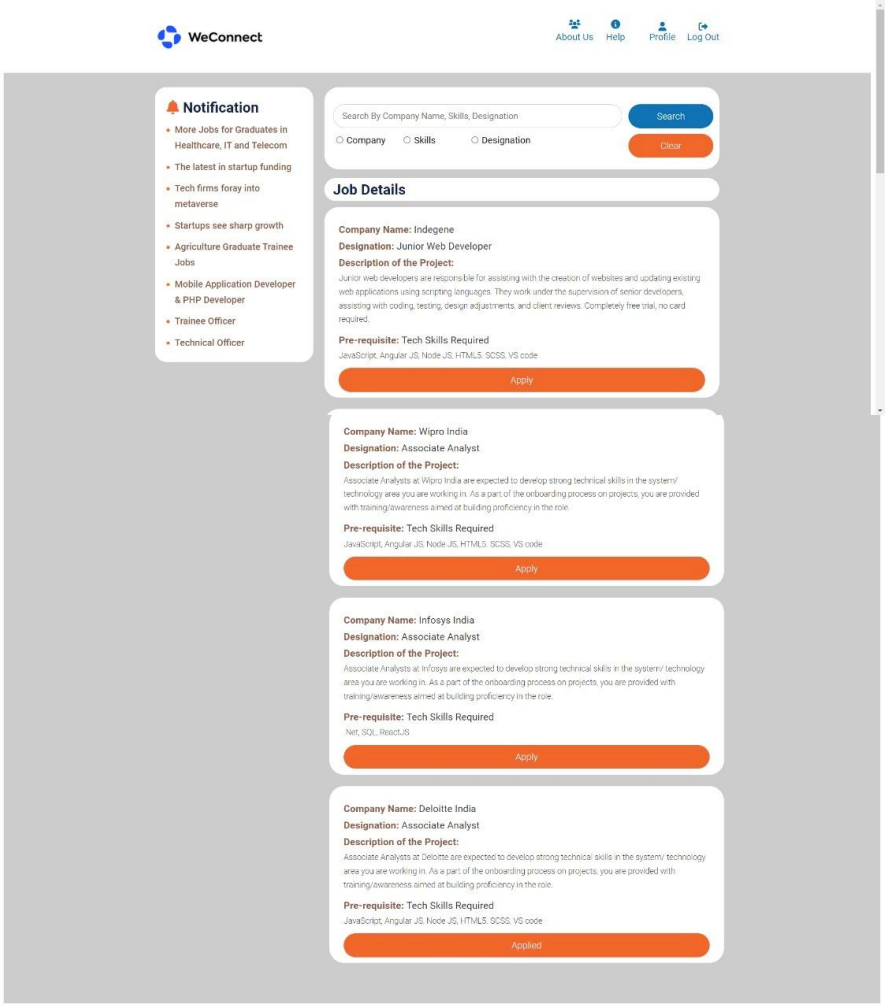

Fig. 3. Job search

The flow of the website is as client browser, Web server and database. The client browser GUI is designed with Angular JavaScript as it follows the MVC Architecture (Model – View – Controller). Where Model is the structure for retrieving data from the database. The view is the graphical user interface of the web page with the dynamicity of data. The controller is the median between models and view, it also does the logic work of the website. Node JavaScript will establish the environment for the whole project and Express JS will set up the web server environment. Express JS will enhance the API (Application Programming Interface) calls and acts as a median between the database and Angular JS. We use MySQL database for data storing as it is based on SQL (Structured Query Language). It performs all the CRUD (Create Read Update Delete) operations with ease.

V. Conclusion And Future Enhancement

WeConnect doesn't aim only at Connecting job seekers and job providers but also aims at giving a platform for like-minded people for sharing thoughts, ideas, and individual growth. WeConnect would create a virtual world of programming communities and create a platform which engages everyone for individual development.

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