

# EMPLOYEE CREDIBILITY PORTAL

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## Abstract

Employee credibility is one of the biggest issues that is existing in the current industry scenario. An employee is recruited after undergoing a very thorough recruitment drive and there are multiple examples where the employees do not join the company even after receiving the offer letter. In all such cases the company has to bear huge losses in terms of training and the recruitment process that had been invested in the candidate. At the last moment the candidates tend to join the better offer they have in hand and reject the rest of the offers in his hand. This does not affect the candidates but for the company it will be a big loss as they had given so much time and resources for that particular candidate.

**Key Words:** Employee Credibility, Recruitment, Offer Letter, Company, Resources

## 1. INTRODUCTION

The Industry faces a huge problem in employee recruitment. The company has to select an employee for a specific job with a different interview process. The time and capital resources of the company involved in this process is also huge. But employees after collecting their offer letters, they might switch to other companies for different higher packages or see a better opportunity than the previous company or leave the organization in short time.



Fig1.1: Employee Credibility

In a few cases the company might also revoke back their offer letter from that candidate without providing any proper justification (the candidate to be selected had gone to various interview processes and spent their valuable time). To streamline these problems in the Industry, the Employee

Credibility Portal is developed. This portal provides the facility for both Employee and Employer to check the integrity of the employee and the organizations.

This portal will assign a credibility score to the candidates and to the organization based on their previous and ongoing performance. The credibility score for the employee is based on various factors like their past records and whether they join the company after accepting the offer letter and the mix of right skills for the desired role and for the Industry it is based on the following factors like their record of recruiting and on boarding the hired candidates.

The rest of the paper is organized as follows: Session (2) is about related product and the work carried out, their methodologies used and limitations are discussed.

## 2. PROBLEM DESCRIPTION

One of the major challenges existing in the current corporate world is that the employees tend to leave the company even after undergoing the entire recruitment process and accepting the offer letter. The companies also revoke the offer of candidates without proper justification. This results in a huge loss to the company in terms of capital and time investment. There are a lot of existing platforms that help in the recruitment but none of them care about the credibility to the company after the employee receives the offer letter.

## 3. LITERATURE SURVEY

The study conducted by K. Princy and E. Rebeka aimed to examine the association between employee commitment and job satisfaction in private universities in the Kurdistan region of Iraq. The study utilized four research methods, namely reliability statistics, frequency method, descriptive statistics, and hypothesis testing. The results of the study showed that employee commitment is positively correlated with job satisfaction, and all three independent factors, including role stress, empowerment, and job insecurity, are associated with job satisfaction. However, the study has some limitations, including its focus only on the public administrative sector and the need for improvement in promotion satisfaction[1].

Ashish Gupta and Sujeet Kumar conducted a study on effective recruitment methods by collecting primary data through questionnaires and analyzing it using statistical techniques. The study found that the best approach to sourcing candidates is through references and networking, and organizations should focus more on long-term consistent performance. One limitation of the study is the need for ongoing efforts to develop the skills and abilities of recruiters[2].

Sabrina D. Volpone, Scott Tonidandel, Derek R. Avery, and Safiya Castel developed a simulation model to examine the predictors used in hiring decisions. The model consists of three predictors, namely education, credit scores, and conscientiousness. The study showed that using credit scores as a predictor is controversial and raises legal and ethical concerns. However, conscientiousness is the most valid predictor of performance[3].

The study by Maria J. Duarte and Jorge Azevedo aimed to identify the main factors that influence employee engagement in remote work. The study used a literature review method and identified five main factors, including job characteristics, social support, technology, work-family conflict, and trust. The study also revealed that remote work can have both positive and negative effects on employee engagement, depending on the organization's policies and practices[4].

The study by Andrew A. Timming and Vida Gulbinas examined the role of physical appearance in hiring decisions. The study used a meta-analysis method and found that physical appearance influences hiring decisions, particularly for jobs that require interaction with customers or clients. The study also revealed that physical appearance discrimination is a pervasive issue in the workplace and can have significant negative consequences for employees. Princy and E. Rebeka have used four methods for this research, the first

method was Reliability Statistics, the second method was Frequency Method, third method used was Descriptive Statistics, and the fourth method was Hypothesis Testing[5].

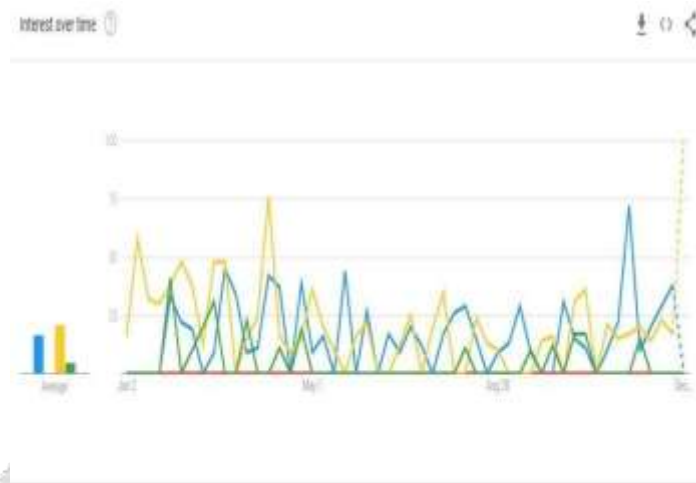


Fig 1.2: Methodology adopted for Employee Credibility

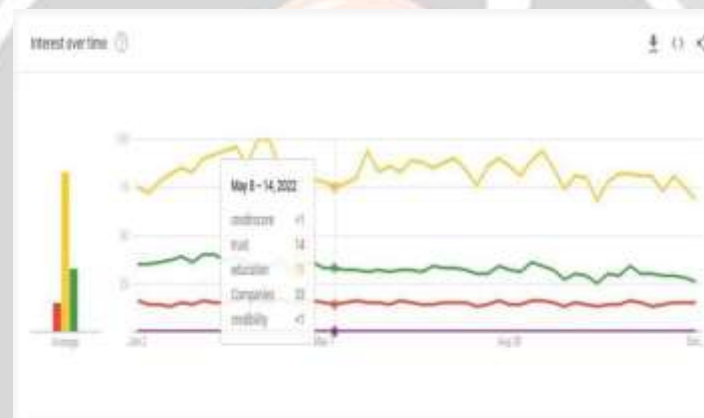


Fig 2.1: Factors considered for Employee Credibility

#### 4. IMPLEMENTATION

The Employee Credibility Portal (ECP) is built on a full-stack MERN (MongoDB, Express, React, Node.js) framework. It has two sections, one for the companies and one for the employees. Companies can post jobs for the employees to apply to, while employees can sign up on the portal and see the listed jobs, apply to their respective ones, and monitor their application statuses.

To achieve this functionality, the portal uses a variety of technologies and packages. For instance, Axios is used for making requests to the backend, while Redux is used for state storing in the backend. JWT is used for authentication, and Mongoose is used to interact with the MongoDB database. Furthermore, the scores for each employee are stored on a blockchain to provide added security and transparency.

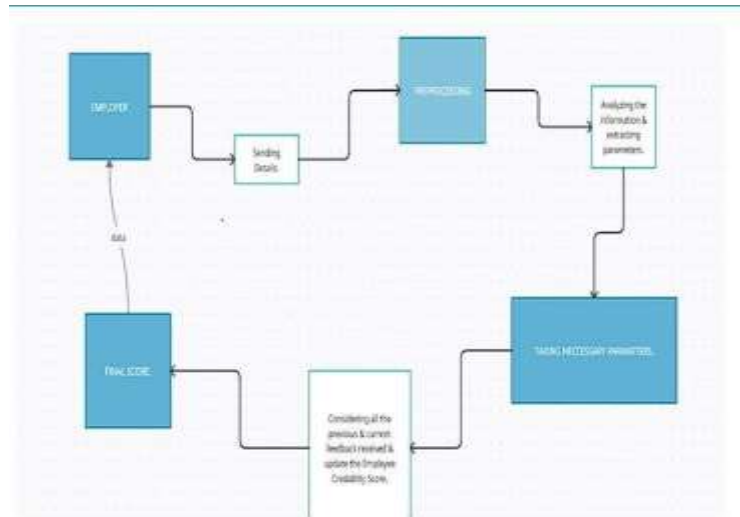


Fig 1.3: Flow Diagram for Credibility Scores

The user journey for a company starts with them signing up and logging into the portal. After they have logged in, they can post jobs by providing job details such as job title, location, and job description. They can also specify any qualifications required for the job. Once the job is posted, it is visible to all employees on the portal. Interested employees can then apply to the job by submitting their resume, cover letter, and other necessary details. The company can then view the received applications and choose which candidates they want to interview.

During the interview process, the company can score each candidate on various parameters such as experience, skill set, and communication skills. After the interview process is complete, the company can update the scores for each candidate. These scores are then used to calculate the credibility score of each employee who has applied for a job in the portal. This score is visible to all companies who are interested in hiring that particular employee, and it helps them make an informed decision.

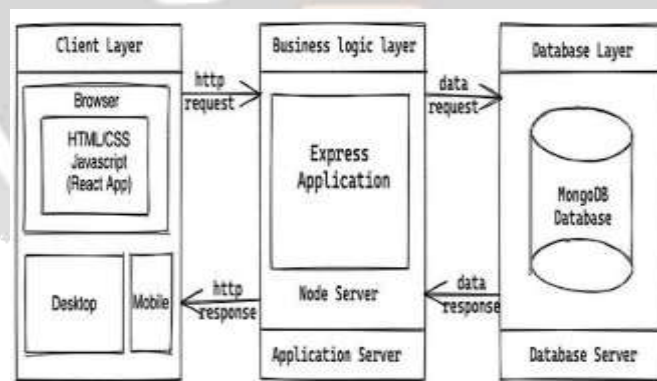


Fig 3.1: System Architecture For The ECP

The user journey for an employee starts with them signing up and logging into the portal. After they have logged in, they can view the list of available jobs and apply to the ones that they are interested in. They can also monitor their application statuses and view the scores that they have received for the jobs that they have applied to. They can update their resume and other details to increase their chances of getting hired.

In addition to the above-mentioned technologies, the Employee Credibility Portal also utilizes blockchain for added security and transparency. Every time a candidate goes through the hiring process and receives a credibility score, the score is recorded on the blockchain, which ensures that the data is tamper-proof and immutable. This feature not only adds an extra layer of security but also helps to maintain a level of trust between the employer and the employee. With blockchain technology, the portal can assure that the scores cannot be altered or deleted, which ultimately helps to build a more reliable and transparent platform for both

companies and employees.

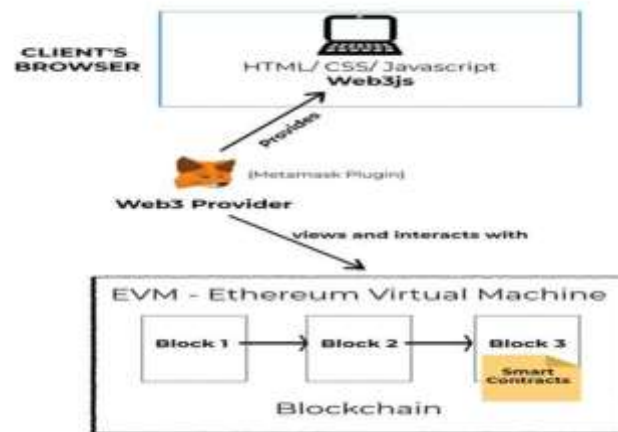


Fig 3.2: Blockchain implementation to store scores

In summary, the Employee Credibility Portal is a robust platform that enables companies to hire qualified candidates based on their credibility scores. It uses a variety of technologies such as Axios, Redux, JWT, and Mongoose to achieve its functionality. The user journey for both companies and employees is seamless and intuitive, allowing them to easily post jobs and apply to them, respectively. Overall, the portal provides an efficient and transparent way for companies to hire qualified candidates and for employees to find their dream jobs.

## 5. MODULES AND PACKAGES

**MERN Stack:** It is a combination of four technologies - MongoDB (a NoSQL database), Express.js (a server-side web application framework), React.js (a front-end JavaScript library), and Node.js (a JavaScript runtime environment). The MERN stack is used to build the web application, and it provides a seamless and efficient way to develop full-stack web applications.

**Axios:** It is a JavaScript library used for making HTTP requests from the client-side to the server-side. Axios is used in the Employee Credibility Portal to communicate with the backend API and fetch data from the server. It is a powerful library that provides features like interceptors, automatic conversion of JSON data, and more.

**Redux:** It is a JavaScript library used for state management in front-end applications. Redux is used in the Employee Credibility Portal to manage the application's state and provide a single source of truth for the entire application. It allows developers to manage complex state in a predictable and scalable way.

**JWT:** JSON Web Tokens (JWT) is an open standard for securely transmitting information between parties as a JSON object. JWT is used in the Employee Credibility Portal for authentication and authorization of users. It provides a secure way to transmit and verify user information between the client and server.

**Mongoose:** It is a Node.js library used for database modeling and schema creation for MongoDB. Mongoose is used in the Employee Credibility Portal to define the database schema, create models, and interact with the MongoDB database.

**Bcrypt:** It is a password-hashing library used to hash user passwords securely. Bcrypt is used in the Employee Credibility Portal to hash user passwords before storing them in the database. It provides a secure way to store user passwords and protects them from attacks.

**React Router:** It is a library used for routing and navigation in React.js applications. React Router is used in the Employee Credibility Portal to handle navigation between different components and pages of the application.

**Redux Thunk:** It is a middleware used for handling asynchronous actions in Redux. Redux Thunk is used in the Employee Credibility Portal to handle asynchronous actions like fetching data from the server, updating the database, and more.

## 6. CONCLUSION:

In this work we aim at increasing the trust between the company and the candidate by providing a credibility score to both of them. Currently there are a lot of cases in which the candidates leave the current offer in hand on receiving a better opportunity. This causes loss to the company in terms of time and money. If the company hires a candidate with the right mix of skill and credibility score that helps them to hire the best and the most trustworthy candidates. In certain cases some companies revoke the offers of candidates without providing any proper justification. So this would impact the credibility score of the company which would create a bad impression for them in the industry.

Overall this platform will ease the process of hiring and will help both the candidates as well as the companies.

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