



KarmikConnect

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Abstract: KarmikConnect is a new app that makes it easier for daily wage workers to find jobs. It acts like a simple and clear meeting place for workers and employers. Employers can post detailed job ads, and workers can show interest easily. This app helps bridge the gap between workers and employers, making the whole process more transparent and efficient. It even has a document verification so the employer can build trust over the worker. Plus, it's handy for contractors too, helping them manage their workers better. Overall, KarmikConnect aims to make finding work simpler and help businesses run more smoothly. This app is easy to process and also user friendly.

Keywords: KarmikConnect, daily wages worker, streamlined interface, contractor, user friendly.

I. INTRODUCTION

KarmikConnect is a super helpful app that makes it easy for people who work day-to-day jobs to find the perfect job for them. It's like a big notice board where bosses can put up detailed job ads, saying exactly what they need, and workers can quickly show their interest. This app is changing the way workers and bosses connect, making it simpler and faster for everyone. One cool thing about KarmikConnect is that it's all about being fair and clear.

It cuts out the waiting and confusion that often happens when looking for work. And it's not just for people looking for work; If you're a boss who hires lots of workers, KarmikConnect helps you too. You can easily manage all your workers and find new ones when you need them. KarmikConnect is here to make finding work easier for everyone involved. It's all about being user-friendly, honest, and making sure everyone gets the job that's right for them.

II. PROBLEM STATEMENT

Labourer looking for employment often lack visibility and access to job opportunities. Employers, on the other hand, face difficulties in reaching out to potential workers efficiently. There's often a lack of trust and credibility in the unskilled labor market, with little or no information available to assess the reliability and performance of either workers or employers. Labourers may face issues related to fair compensation and timely payments, and employers may encounter difficulties in accurately tracking and disbursing wages.

Labourers may encounter discrimination or exploitation in the labor market, and employers may face accusations of unfair hiring practices. Existing job matching apps like Naukri.com, Mytat, and Indeed provide platforms for connecting job seekers and employers. However, they primarily focus on long-term employment rather than daily wage or casual labor. The workers depending only on the contactors leads to getting less salaries for their work. Many unskilled daily wage laborers, particularly those in rural areas, face geographical challenges in finding nearby job opportunities. Overcoming these geographical barriers is essential to improving their employment prospects.

III. LITERATURE SURVEY

[1] Hrishikesh M , Mayur S , Hemadri L Sidnag , Dr B Ravishankar , Dr V.N. Shailaja " Design of Blockchain Aggregator for Benefit of Rural Workers using I.E Techniques" Proceedings of the International Conference on Mainstreaming Block Chain Implementation (ICOMBI) 2020 - Rural workers today are facing unemployment issues due to unorganized work sector in the construction domain. Local contractors hire these workers on a first-come-first-serve daily wage basis until they fulfill their capacity. This method has been observed to be ineffective as it depends on the demographic of the location. This paper exhibits an implement of a Blockchain network, which ensures the supply chain visibility thus, seamlessly connecting all stakeholders of the supply chain network who are a part of the Blockchain ecosystem. This paper also exhibits the use of Mathematical metrics such as the cosine similarity index which helps us determine the closeness of two or more tensors and Operations Research which help us optimize the allocation of jobs. These computations are performed with the help of the smart contracts, which are incorporated in the Ethereum Blockchain network. The transactions are later verified, and blocks are created. This approach will incorporate a trust factor in the Blockchain transactions and tackle the growing concern of unemployment in the country.

[2] Xinle Yang , Yang Chen and Xiaohu Chen in " Effective scheme against 51% Attack on Proof-of-Work Blockchain with History Weighted Information" Published in 2019 IEEE International Conference on Blockchain (Blockchain)-Proof-of-Work (PoW) is a popular protocol used in Blockchain systems to resolve double-spending problems. However, if an attacker has access to calculation hash power greater than half of the total hash power, this attacker can create a double-spending attack or 51% attack. The cost of creating a 51% attack is surprisingly low if hash power is abundantly available. That posts a great threat to lots of PoW blockchains. We propose a technique to combine history weighted information of miners with the total calculation difficulty to alleviate the 51% attack problem. Analysis indicates that with the new technique, the cost of a traditional attack is increased by two orders of magnitude.

[3] G Devisree , Ch. Rupa , U Gayathri , Hemanth Ch Kumar "A Cloud Based Mobile Application to Hire Unskilled Workers" Published in 2022 IEEE International Conference on Current Development in Engineering and Technology (CCET) -In this modern era, the Majority of individuals are preferring mobile applications for the completion of their work. Generally, there are some applications that can hire skilled workers. People living in cities cannot directly contact the workers. The proposed system will help people to hire workers on a daily/contract basis. It gives everyday work to the workers who will be idle. This system will help both Employers and workers as well. This proposed system offers services specifically for laborers in the construction industry. Workers and Employers have to register and login into the system. The worker profile page contains the details such as location, types of work, activity status, and demand wages. Whereas, Employer profile page contains the details such as work location and personal information. Payment can be done offline. Work providers can rate the worker's performance.

[4] Murat Kuzlu , Manisa Pipattanasomporn , Levent Gurses , Saifur Rahman "Performance Analysis of a Hyperledger Fabric Blockchain Framework: Throughput, Latency and Scalability" Published in 2019 IEEE International Conference on Blockchain- Focusing on one of the most popular open source blockchain frameworks—Hyperledger Fabric, this paper evaluates the impact of network workload on performance of a blockchain platform. In particular, the performance of the Hyperledger Fabric platform is evaluated in terms of: (a) throughput, i.e., successful transactions per second; (b) latency, i.e., response time per transaction in seconds; and (c) scalability, i.e., number of participants serviceable by the platform. The results indicate that the instance of Hyperledger Fabric platform being implemented can support up to 100,000 participants on the selected AWS EC2 instance. As long as the transaction rate is maintained within 200 transactions per seconds, the network latency is in the order of fraction of a second.

[5] A. Roy, V. Shah , A. M. S. Zalzal, "A feasibility study for the development of an employment system for underserved communities", 2015 IEEE Canada International Humanitarian Technology Conference (IHTC2015)- This study deals with the formulation of a technology-based solution to the problem of unemployment in underserved communities. Jobs for low-skilled and unskilled labor in the informal economy are acquired by means of referrals and contacts, but this approach suffers from making employment related information privileged only to a few individuals. In order to gauge the feasibility of a technology solution, the employment seeking process was studied through interviews conducted with all stakeholders - employers, candidates and intermediaries like NGOs and employment agencies. The studies were conducted at slum communities in Ahmedabad, India. After the interviews, two questionnaires were developed that drew from the interviews, one for the members of the community and the other for employers who recruited from the community. The employers also went through a semi-structured interview in order to capture any pertinent data that was not represented in the questionnaire. Based on the responses to the surveys a preliminary version of the system was constructed.

[6] M. N. Islam, M. A. Ahmed and A. K. M. N. Islam, "Chakuri-Bazaar: A Mobile Application for Illiterate and Semi-Literate People for Searching Employment", International Journal of Mobile Human Computer Interaction- The purpose of this paper is to explore the design principles to develop mobile applications for illiterate and semi-literate people and to design, develop, and evaluate a mobile application for illiterate and semi-literate people in Bangladesh using the revealed design principles and following a design science research approach. The authors first conducted a requirement elicitation study to reveal a set of design principals to make the user interface (UI) intuitive for illiterate and semi-literate people. Then, a mobile application (Chakuri-Bazaar) was developed following these design principals. Finally, the application was evaluated with 40 illiterate and semi-literate people through a field study. As outcome, a set of design principles was revealed for designing usable mobile application for illiterate and semi-literate people. The findings of the evaluation study suggest that the application was effective, efficient, and the users were satisfied in terms of its ease of use, ease of learning, willingness to use it in future, and willingness to recommend it to others.

[7] E. Bagarukayo and E. Mwesigwa, "Jobs256 Mobile app linking job seekers to job opportunities", 2017 IST-Africa Week Conference (IST-Africa)- There is a challenge of unemployment among the youth in Uganda today. Many University graduates fail to get jobs because the job market seems saturated since the available jobs cannot be found.

The study therefore aimed at linking the job seekers and available jobs. To achieve this aim we developed a mobile app that aggregates existing job postings from web portals to improve accessibility, timeliness and efficiency. Agile methodologies particularly Scrum and eXtreme Programming were used to develop the mobile application (app). Results showed the app is not only saving employers monetary resources but provides a sustainable and practical way to link Job seekers and to available job vacancies.

[8] O. Pandithurai, D. Jayashree, D. K. Aarthy, R. Jaishree, K. Bhavani and T. Dharani, "Smart Job Recruitment Automation Using Location Based Filtering", 2021 International Conference on Advancements in Electrical Electronics Communication Computing and Automation (ICAECA)- Knowledge is both theoretical and practical information, facts and skills we acquire through experience or learning. Our knowledge increases as we gain more experience. To. The employers often receive an enormous number of applications which is usually unstructured resumes that are different to process and analyze manually. The traditional method of recruitment is becoming inefficient. Because of the rapid advancement of Internet technology, many businesses have switched to an online recruitment approach. To overcome the drawbacks there are several automatic recruitment systems have been proposed. The online recruitment system has proved to be more effective in processing Candidate resumes and matching them to their relevant job posts. The effectiveness of the proposed system is need for a location-based services that can recommend users for jobs within their location. The advantage of this system is to reduce the traveling distance, save time, easy process and make offers confidential. Therefore, this website access the location of job seekers. It helps job seekers to apply for the job which is nearby their location and also satisfy the company requisite.

[9] Saurabh Shukla, Saif Ali Khan, Harsh Kumar Singh and Manmohan Sharma, "Online Job Search Application", International Journal of Scientific Research in Computer Science Engineering and Information Technology (IJSRCEIT)- Searching the jobs that best suits the interests and skill set is quite a challenging task for the job seekers/Workers. The problem arise from not having proper knowledge on the organization's objective, their work culture and current job openings. In addition, looking for the perfect workers with desired work skill set to fill their current job openings is an important task for the recruiters of any organization, agencies, companies, contractors etc. Online Job Search Applications have certainly made job seeking convenient on both sides. Job Search application is the solution where recruiter as well as the job seeker/Workers meet aiming at fulfilling their individual requirement. They are the cheapest as well as the fastest mode of communication reaching wide range of desired workers on just a single click irrespective of their geographical distance.

[10] David Israel Nicolas Quispe , Josue Martin Nicolas Quispe , Jose Luis Herrera Salazar , Johny Pretell Cruzado, "Mobile App for the Promotion of Home Services", 2020 IEEE Engineering International Research Conference (EIRCON)- Home services advertising presents difficulties to the worker who has as an obstacle the cost of the advertising used to promote his services so that a large amount of people can see it, as well as the deficient training in technological tools has brought as consequence the usage of traditional methods which made being located and hired in real time more difficult. In this sense, the objective of this research was to develop and implement a mobile application that allows home services advertising and is able to fulfill all the previous mentioned factors; XP methodology was used for the development of the application; ten cases were used as evidence where demonstrated it was capable of advertising household services, which concludes that the mobile application can advertise household services.

[11] Ephzibah Ep , Suja Radha, "Framework of an Intelligent Job Recommendation System", International Conference on Sustainable Computing in Science, Technology & Management (SUSCOM-2019)- Employment opportunities provided to men and women empower them in social and economic aspects. In developing countries like India and other Asian countries, people are not aware of these resources and thus fail to grab them. The study on various employment opportunities both from governmental and nongovernmental sectors insist on eradication of unemployment problem in the society to greater extent. The framework provides mechanism to amplify job opportunities to the middle and lower class people using a mobile application. The district chosen for the study is Vellore, Tamil Nadu, India. Analysis on the unemployment problem has been done and a solution for the same is provided through a mobile application (Mobile app). Collecting various job openings and taking them to the appropriate person in the nearby location through mobile app is the task. The prototype of the model is framed using intelligent pattern matching technique with locality based classification. A job recommendation system can be built based on the proposed framework; so that it can help the people in the locality to get job alerts based on their qualification and skillset.

[12] Ziad Elgammal , Abdullah Barmu , Hamza Hassan , Khaled Elgammal , Tansel Özyer , Reda Alhajj, "Matching Applicants with Positions for Better Allocation of Employees in the Job Market", 2021 22nd International Arab Conference on Information Technology (ACIT)-Nowadays most people who are looking for a job use the Internet,

visiting websites like LinkedIn or Indeed so they must face hundreds of recruitment companies and job ads. The process of applying for a job is time consuming especially in screening, preparing and attending tests and interviews. In addition, job applicants do not know which companies are most proper for them, this job-hunting strategy can easily lead to employment dissatisfaction or failure. therefore, it is more efficient to recommend a few most suitable jobs.

IV. PROPOSED SYSTEM

The primary objective of the suggested approach is providing unskilled workers to Employers through a mobile application-based solution. Additionally, it provides an answer for employers that are looking for employees. This application has three modules, those are worker, employer and cloud. Module 1: Worker If the person is a worker, then workers have to register into this system. After registration, worker has to login into the system. It takes to a page which contains two options such as whether the registered user is Worker or Employer. Workers have to choose the Worker option. It takes to a page which consists of types of works. Worker has to select the type of work based on his need. The worker may submit a request to the employer if there is a vacancy in these particular services and the worker is available to perform the task. If accepted, the work will be assigned to him otherwise he can choose other Employer/Work. After the completion of the work, the worker gets paid by the Employer. Module 2: An Employer If the person is an Employer, then employer have to register into the system. After registration, employer have to login into the system. It takes to a page which contains two options such as whether the registered user is worker or an Employer. Worker has to choose Employer option. It takes to a page which consists of types of works. An Employer has to select the type of work based on his requirements. An Employer has to post the work requirements. Employers can accept the workers who placed a request to that particular work. Employers can get their work done in this way. Employers can pay the workers in offline mode and can give Rating to the worker's performance. Module 3: Cloud When the user registers into the system, their details will be saved into the Cloud. When user try to login into the application, their details will be verified by the Cloud. Every user detail will be stored separately in the cloud. Whenever the user chose the type of work, specific details of the work will be displayed by the cloud.

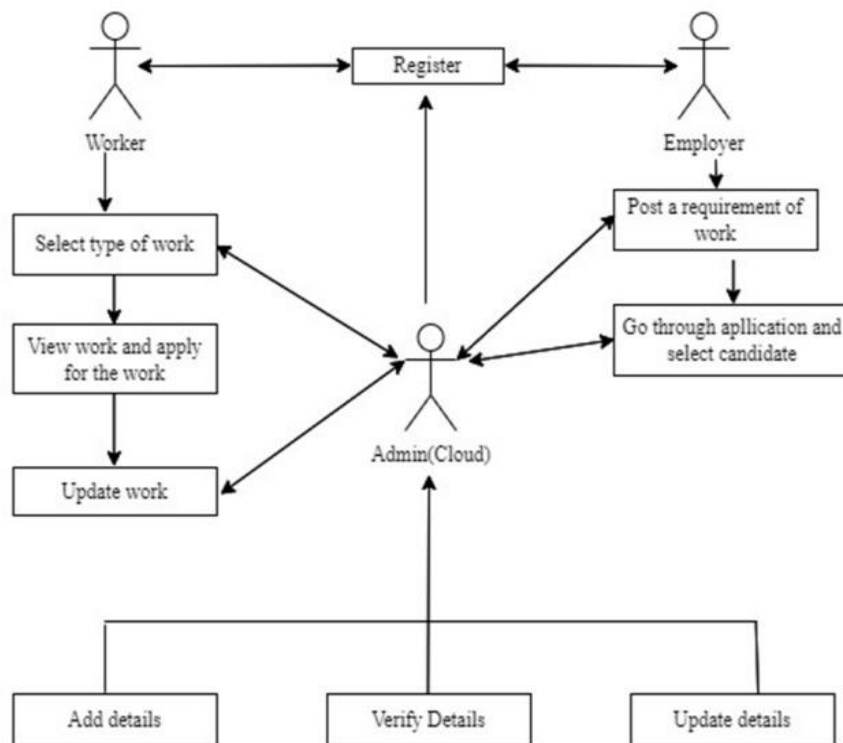


Fig.1 Proposed System Architecture

Fig 1. shows overview of the system architecture. This diagram consists of actors such as Worker, Employer and Admin. The system includes the use cases of login, basement construction, wall construction, roof construction, flooring & marble construction, request placement, payment processing, and status updating.



Both the Worker and Employer has to select the type of work. The worker has to choose his/her capable work and places a request to the Employer. The employer chooses required work to be completed and accepts the worker based on their requirements. Then work will be assigned to the worker and worker's status will be updated. After the completion of work, the employer pays the worker in offline mode. The employer can give rating to the worker according to the worker's performance.

V. CONCLUSION

We have presented a user-friendly app. KarmikConnect emerges as a transformative solution, revolutionizing the interaction between daily wage workers and employers. Its mobile application's brilliance lies in its ability to seamlessly connect labor with job opportunities through a user-friendly platform. By enabling employers to post detailed job ads enriched with key tags, it efficiently matches them with interested workers. Additionally, the inclusion of a rating system empowers users, fostering trust and reliability within the platform's community. The app's unique feature of contractors managing contracts and organizing workers within their network adds another layer of efficiency to the entire process. Overall, KarmikConnect not only bridges the gap but also cultivates a symbiotic relationship between employers and workers while revolutionizing the landscape of labor engagement.

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- [3]. G Devisree, Ch. Rupa, U Gayathri, Hemanth Ch Kumar "A Cloud Based Mobile Application to Hire Unskilled Workers" Published in 2022 IEEE International Conference on Current Development in Engineering and Technology (CCET).
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- [10]. David Israel Nicolas Quispe, Josue Martin Nicolas Quispe, Jose Luis Herrera Salazar, Johny Pretell Cruzado, "Mobile App for the Promotion of Home Services", 2020 IEEE Engineering International Research Conference (EIRCON).
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