

Online Platform Empowering Daily Wage Workers for Enhanced Opportunities and Efficiency

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Abstract

The pandemic has been harsh to many of the people, and among the people who have seen the worst of it, were the daily wage workers who not only have to protect themselves from the virus but are also struggling to save their jobs. This idea would be useful not only to the workers, but also the common people like us who need their assist. This article addresses the idea that can be implemented to provide a web platform for the daily wage workers to find a job that could be either temporary or permanent based on the preference of the employee and the employer. The workers in search of daily usage would be reporting every day to the officers and would be waiting for these notifications to be posted and block notifications of their choice. This website will reduce the problem of the workers to go in search of a job in the crowds which could increase the risk of coming in contact with the virus. People can find their respective jobs just by sitting at their homes conveniently.

Keywords

Daily-wage workers, Co-ordinators, Government officers

Introduction

Now a days the people are very much attracted towards making their works easier. Our world is growing so fast with the technology. By combing these two factors there are many platforms coming now a days to make our lives much and much easier. Our idea is also creating an interface which coordinates the daily wage workers and the person who is need of one which will be beneficial for both the user and worker. Coming into details of this platform, this is an Interface which allows the client to return to his needful parameters and can post his/her requirements in form of the notifications live [1, 2].

Creating an online platform for daily wage workers that integrates nanotechnology can greatly enhance their working conditions, safety, and efficiency. The integration of nanotechnology into an online platform for daily wage workers holds promise in enhancing their opportunities, streamlining processes, and fostering a supportive ecosystem for better livelihoods and sustained employment. This online platform, integrated with nanotechnology, is designed to uplift daily wage workers by providing an empowered space for job opportunities and efficiency [3, 4].

We will appoint the co-ordinators (or) the volunteers at the government offices. According to the timings the workers will be reporting to the respected government offices. Searching for a job has not been an easy task for these workers due to the lockdown. Most of the communities have shut down their entrances for outsiders to avoid as much as the crowd possible. Even if the communities have not been shut down, the hired workers are not able to find a permanent job because the employers are firing them after a short period of time due to the

multiple covid waves and fear. Daily wage workers like cooks, maids, electricians, mechanics, launderers, iron man, gardeners, plumbers, babysitters/nanny's, senior citizen care or even student tutors can use this platform to find a job in a faster and easier way and follow all the necessary precautions by maintaining social distancing. As much as we are able to do our household work, most of us need an assist to do the chores as we need to buy us some time and energy to do the other jobs that we do for a living. Hence, we can say that the need for a daily wage worker to get a job for their survival and the need for us to get an assist is mutual. This is going to be an extremely useful platform not only for daily-wage workers but also for the ones who are great at their job but do not have any attractive profile and for the ones who are willing to do a part time job for some extra money in hand [5, 6].

The time series monthly data is collected on stock prices for sample firms and relative macroeconomic variables for the period of 5 years. Monthly prices of KSE - 100 Index is taken from yahoo finance.

Literature survey

Hiring has become one of the important challenges in the context of online labor marketplace. Besides physical or traditional hiring, where the workers are hired either as a full-time employee or as a contractor, hiring from online marketplaces are done for individual jobs of short duration. Since these tough times of covid and the lockdown, there has been a severe crisis of employment opportunities in local labour markets. In a long-month extensive field study undertaken by a research team at the Centre for New Economics Studies, have documented the stories of nearly 200 daily wage workers through a random survey which was held in mazdoor mandis in Lucknow and Pune.

Getting work for even two days in a week has been excruciatingly difficult for the daily wage workers. Daily wages too, for any work possible, have dipped by half. The social phenomenon of short-term hiring of daily wage workers or freelancers in crowdsourcing platforms is increasing very rapidly to achieve flexibility and cost savings. Some found that amount of time spent by a freelancer for selecting a task is more when comparable with the time spent on working on the task. Some people conducted a survey to understand the kind of recommendation workers prefer while performing tasks on a micro-task platform [7].

A committee developed a system which uses social networks to build the worker's preference for freelancer-task matching. In supply driven marketplaces each freelancer advertises his/her skills and capabilities with confidence and can add details of his experience, etc., as services to attract clients and compete with other professionals in the market-pool. Clients will search and choose their favourite one from the services accordingly based on the client's interests. Even the ratings which are given by previous client will be helpful in choosing an efficient and capable worker according to their work [8].

Experimentation

Proposed model

This is going to be a complete website that can be used by the daily wage workers to find a job and the employers (The customer or the user who is looking for an assist) who can hire the worker. The website primarily gives two options: (i) To login as a worker or (ii) To login as an employer.

All the daily wage worker has to do is to create an account by using their email ID and password and undergo an Aadhaar verification process for security reasons, provide their details such as name, location, age, phone number, religion, photo, gender, comfortable languages, experience, etc. The employer can create an account using their email ID and password and undergo an One Time Password verification process either through the mobile number or their email address. Once the employer is logged in, he/she can filter the available workers based on their requirement of roles (such as cooks, maids, babysitters, senior citizen care, iron men, plumbers, painters, carpenters, mechanics, etc.), language (based on the language they are comfortable with), location, age, gender, experience, etc.

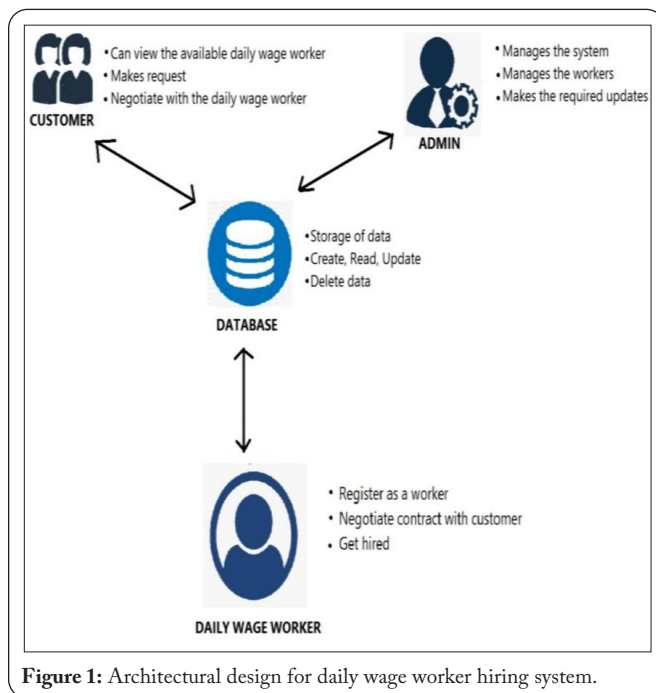
Both the employer and the worker can provide their vaccine certificates and their covid negative certificates accordingly. Once the worker is chosen, the user gets an option to communicate with the worker either through the website or through their contact number and make the negotiations. Based on their understandings and preferences the worker can be either hired for a temporary period or as a fulltime employee by basing upon the interest of the client. If the client believes that the worker is working hard and the worker seem to be honest, then he can hire that particular worker on permanent basis. The client even has an opportunity to rate the worker accordingly by the worker's ability and efficiency on his work. By this the new clients who are trying to hire a worker can see the ratings and can decide whether he can hire that worker or not (Figure 1).

Technology platforms

This project is going to be implemented using some of the technologies: ReactJs is used for the front-end development (client-side), MySQL as the database, Node.js for back-end development (server-side).

ReactJs

ReactJs is a declarative, efficient, capable, and flexible JavaScript library for building reusable UI components. It is a free and opensource platform, component-based front-end library responsible only for the view layer of the application. It was created by Jordan Walke, who was one of the software-engineer at Facebook. It was initially developed and maintained by Facebook and later it was used in its products like WhatsApp and Instagram. Facebook developed ReactJS in 2011 in its newsfeed section, but it was released and reached the public in the month of May 2013. Today, many of the websites are built using MVC (model view controller) architec-



ture. In MVC architecture, ‘V’ stands for view, whereas the architecture is provided by Redux or Flux. A ReactJS application is made up of different multiple components, where each component is responsible for outputting a small and reusable piece of HTML code. The components are main also known as the heart of all ReactJs applications. These components can be used or nested with other components to allow complex applications to be built of simple building blocks. ReactJs uses virtual DOM based mechanism to fill the required data in HTML DOM. The virtual DOM works much faster as it only changes individual DOM elements instead of reloading complete DOM every time.

MySQL

MySQL is a free and open-source platform with a relational database management system that works on many platforms. It also provides multiuser access to support many storage engines and it is backed by Oracle. So, you can buy a commercial license version from Oracle to get or aligned for premium support services. The features of MySQL are as follows:

- **Ease of management:** The software easily gets downloaded and also uses an event scheduler to schedule or perform the tasks automatically.
- **Robust transactional support:** It holds the ACID property (Atomicity, Consistency, Isolation, Durability) and it also allows distributed multi-version support. Comprehensive application development MySQL has many plugin libraries to embed the database into any application. It also supports the stored procedures, triggers, functions, views, and many more for the application development.
- **High performance:** It provides fast load utilities with different memory caches and table index partitioning.
- **Low total cost of ownership:** It helps in reducing licens-

ing costs and hardware expenditures.

- **Open source and 24x7 support:** This RDBMS can be used upon any platform, and it offers 24x7 support for open source and enterprise editions.
- **Secure data protection:** MySQL supports powerful mechanisms to ensure that only authorized users can have access to the databases.
- **High availability:** MySQL runs high-speed master/slave replication configurations, and it can offer the cluster servers.
- **Scalability and flexibility:** With MySQL one can run deeply embedded applications and create data warehouses holding enormous amounts of data.

Node.js

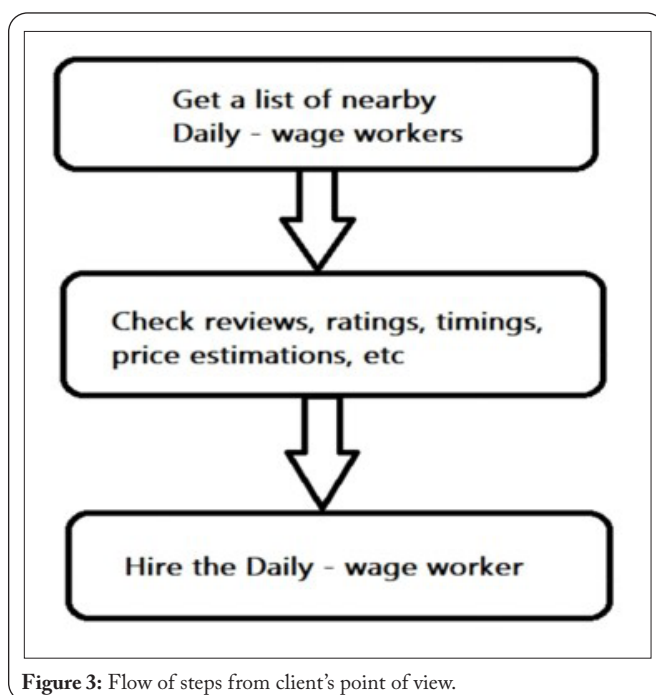
Node.js is a free and open-source platform, cross-platform runtime environment for developing server-side and some networking applications. Node.js applications are written in JavaScript, and they can run within the Node.js runtime on OS X, Linux, and Microsoft Windows. Node.js also provides a rich library of various JavaScript modules which can simplify the development of web applications using Node.js to a very great extent. Features of Node.js are some of the important features that make Node.js the first choice for software architects.

- **Event driven and asynchronous:** Here all the APIs of Node.js libraries are asynchronous, and non-blocking. Where it means that it is based on server, and it never waits for an API to return the data. The server immediately moves to the next API after calling it and a notification mechanism of events of Node.js helps the server to get a quick response from the previous API call.
- **Faster:** As it was built on Google Chrome’s V8 JavaScript Engine, this library is much faster in code execution.
- **Single threaded but it is highly scalable:** It uses a single threaded model with event looping. The event mechanism helps the server to respond in a nonblocking way and makes the server highly technical as opposed to traditional servers which create limited threads to handle requests. Node.js uses a single threaded program and the same program can provide different services to a much larger number of requests than traditional servers like Apache HTTP server.
- **No buffering:** Node.js applications never buffer the data. These applications simply output the data in the form of chunks.
- **License:** Node.js is released in the form of MIT license.

Results and Discussion

The daily wage workers like cooks, maids, electricians, mechanics, plumbers, babysitters/nanny’s, senior citizen assists can upload their details and availability as shown in [figure 2](#).

Once the worker is logged in, the worker can add the details about them like their name, location, working hours,



phone number and Aadhaar details. The worker can even choose their mode of payment, accordingly so that the client is also allowed for it. The payment can be done either through cash in person or use the portal for it.

The person in need of them can filter them based on their requirements like locations, language, availabilities, etc and hire the daily wage workers as shown in [figure 3](#).

Once the worker is chosen, the employer can choose to hire the worker as a fulltime employee or temporary worker based on his/her preference and the employee can choose to do the same based on his/her availabilities and choose their mode of payment. The payment can be done either through cash in person or use the portal for it.

Conclusion

While all the existing systems stay relevant in the online hiring process between the common people (employers) and the daily wage workers (employees). This will be beneficial to both workers and clients. It saves a lot of time for both the workers and clients as well. The information about the workers and clients is mentioned properly, so there is no chance of confusion or misleading. The information of both the clients and workers are directly uploaded using Aadhaar card verification for high security. Having the right tool to facilitate the process is of paramount importance to both the daily wage workers and people like us, as such the proposed system shall provide a reliable web platform which will not require any pre-requisite installations and can be used on any device with minimal internet connection.

Acknowledgements

None.

Conflict of Interest

None.

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