

# A Review of Digital Employment Platforms for Daily Wage Workers

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**Abstract**— The rapid expansion of the gig economy has transformed employment structures, offering flexible work opportunities through digital job-matching platforms. While these platforms have successfully catered to skilled professionals and freelancers, daily wage workers continue to face significant barriers to employment due to digital illiteracy, financial insecurity, and the lack of structured hiring mechanisms. This review critically examines existing digital employment platforms, identifying key limitations such as wage instability, algorithmic job allocation biases, and the absence of trust-building mechanisms. Furthermore, the paper explores the role of artificial intelligence (AI) and real-time job-matching technologies in bridging employment gaps for daily wage workers. It highlights the need for mobile-friendly, location-based platforms that offer transparent wage structures, financial planning tools, and improved worker-employer trust mechanisms. Finally, this study presents future research directions aimed at developing inclusive, fair, and sustainable digital employment ecosystems for unskilled and semi-skilled workers in the gig economy.

**Keywords**— Gig economy, K-Nearest Neighbours (KNN), AI-driven job matching, IVR (Interactive Voice Response), USSD (Unstructured Supplementary Service Data).

## I. INTRODUCTION

The gig economy has rapidly expanded, transforming traditional employment structures by offering on-demand and flexible work opportunities. Digital job-matching platforms have played a crucial role in this shift, enabling workers to access short-term employment. However, while these platforms efficiently serve skilled professionals, freelancers, and service-based workers, they largely fail to accommodate daily wage workers who often lack digital literacy, financial security, and structured hiring opportunities.

Despite technological advancements, most gig platforms are not designed for non-professional workers, who continue to rely on informal hiring networks and

intermediaries. This limits their ability to secure fair wages and stable employment. The absence of trust mechanisms, financial protections, and real-time job-matching further adds to their challenges, making it difficult for them to compete in an increasingly digital job market. Additionally, emerging technologies such as machine learning and AI-driven workforce management have the potential to bridge employment gaps and create fairer, more accessible digital labour markets.

This paper critically examines existing digital employment platforms, identifying their limitations in serving daily wage workers and exploring potential solutions to make these systems more inclusive, transparent, and worker-friendly. It discusses trust mechanisms, financial security measures, and AI-based job-matching models that could enhance employment accessibility for this underserved workforce. Additionally, the paper highlights future research directions that could lead to more sustainable and equitable digital employment solutions.

## II. LITERATURE REVIEW

### A. The Gig Economy and Its Evolution

The gig economy has, in many ways, changed employment paradigms and established flexible forms of employment across the globe. According to Mehta [1] while gig platforms provide flexibility, they also pose risks such as worker exploitation, income instability, and job insecurity. Additionally, many gig workers struggle to secure continuous employment due to algorithmic job distribution, where platforms assign jobs based on internal metrics, often favoring certain workers over others. This reliance on automated ranking systems can create unequal access to opportunities, further exacerbating employment challenges and economic disparities within the gig workforce. Stanton and Thomas [2] examine how real-time job matching algorithms increase employment accessibility, especially for

workers from underprivileged backgrounds. The expansion of digital payment systems and mobile connectivity has further shaped gig work, allowing for faster salary distributions and remote employment opportunities. However concerns remain regarding digital accessibility and skill disparities, as many low-income workers face technological barriers that limit their participation in digital labor markets. The study emphasizes that as the gig economy continues to evolve, policymakers and platform operators must address structural inequalities to ensure fair opportunities, social security measures, and sustainable employment for all workers in the digital economy.

### B. Limitations of existing job matching platforms

Digital job-matching platforms have transformed employment accessibility by offering flexible work opportunities. However, most of these platforms are primarily designed for skilled professionals, freelancers, or service-based workers, leaving daily wage workers underserved. Freelance platforms, such as Upwork and Freelancer [3], cater to highly skilled professionals who possess digital literacy and can maintain online profiles. These platforms rely on bidding systems and portfolio-based hiring, making them unsuitable for workers who lack formal training or technical expertise. Service-based platforms, like Urban Company[6], focus on verified and certified professionals, restricting access for unskilled or semi-skilled workers who do not meet their qualification criteria. Task-based platforms, such as TaskRabbit [7], offer temporary gig work, but their availability is often limited to urban areas, creating geographic constraints that exclude workers from rural or semi-urban regions. Additionally, financial support platforms, including WorkJam and DailyPay [5], provide early wage access and income management tools for gig workers but do not facilitate actual job-matching, forcing workers to rely on informal hiring methods.

The lack of structured hiring processes, wage transparency, and inclusive digital solutions further exacerbates employment challenges for daily wage workers. Many of these individuals struggle with inconsistent income, limited access to fair-paying jobs, and the absence of trust mechanisms within digital employment systems. Despite the increasing adoption of AI and machine learning in workforce management, existing platforms fail to integrate real-time job-matching solutions that consider the unique needs of unskilled and semi-skilled workers. Addressing these challenges requires a shift toward more inclusive, location-based, and skill-agnostic employment platforms that remove entry barriers and create equal job opportunities for all workers in the gig economy.

### C. Trust and Security in Digital Labour Markets

In digital labor marketplaces, trust is essential since it affects platform credibility and worker-employer interactions. The article [4] discusses that rating and verification systems let employees to acquire a reputation based on past performance and client input, which contributes to increased reliability. However, biased reviews and opaque algorithms often result in unfair job distribution, forcing workers to accept low wages and unrealistic demands to maintain ratings. Additionally, worker security remains a major concern. Many gig workers deal with unfair account deactivations, salary theft, and a lack of legal protections, even though some platforms provide payment protection and dispute resolution. In order to provide gig workers with equitable treatment

and job stability, the report recommends increased transparency in rating algorithms, improved labor safeguards, and structured wage policies.

### D. The Role of Digital Platforms in the Evolution of the Gig Economy

Mundhe E [8] explores the significant impact of internet platforms on the gig economy in India and highlights the potentials and difficulties they present in the study. The study divides digital platforms into four categories: e-commerce, food delivery, ride-sharing, and freelancing. Each of these categories has a big impact on job dynamics. The study highlights how digital platforms democratize work opportunities by transcending geographical barriers and offering flexible employment. However, the study also identifies critical concerns such as wage instability, lack of social security, and absence of regulatory frameworks, which threaten the long-term sustainability of gig employment. The gig worker landscape is anticipated to be redefined by emerging trends including hyper-local job platforms, the integration of artificial intelligence (AI), and the growing need for specialized skills. The study emphasizes the need for legislative changes that guarantee equitable compensation, worker protection, and sustainable digital labor markets to make the gig economy more inclusive.

### E. Enhancing Well-Being for Low-Skilled Gig Workers through Digital Platform

In their study [9] Arnoldi, Bosua and Dirksen identifies the challenges faced by low-skilled gig workers and propose ways in which digital platforms can be designed to improve their well-being. The study outlines important aspects that impact worker welfare, including contracts and regulatory protections, algorithmic control, social connectivity, and mechanisms for job-related evaluation and rewards. Due to the absence of standardized contracts, many low-skilled gig workers experience job insecurity. Nevertheless, job stability can be increased by guaranteeing fair and transparent agreements. Additionally, gig workers often lack performance-based incentives and formal recognition, making structured appraisal and reward mechanisms essential for motivation and job satisfaction. Another important consideration is social connectivity, since gig workers usually work alone, which affects their sense of support and belonging. Features of networking among the workers could be functionally integrated on digital platforms to foster caring for belongingness. The article provides evidence that there is a need for designs for platforms that privilege workers by focusing not so much on matching jobs but on establishing a fair economy for gig workers.

### F. ServiceArc: An automated approach to daily wage labour management

The recent study [10] ServiceArc, is an Android-based job-matching platform that uses an automated approach to bridge the gap between contractors, clients, and daily wage workers. It ensures transparency and accessibility for unskilled and semiskilled workers and aims to eliminate the reliance on intermediaries ensuring fair wages. It includes features like geolocation services for effective and localized job matching, multilingual support to accommodate workers

from a variety of language backgrounds, and standardized pricing systems to avoid wage exploitation. The platform also reduces reliance on intermediaries by facilitating direct worker-customer connections and incorporates a rating and verification system to increase hiring confidence. The study identifies several adoption hurdles, including worker's restricted smartphone availability and low digital literacy, and recommends using awareness campaigns and streamlined user interface designs to improve accessibility. By guaranteeing fair employment practices, job security, and financial stability in the gig economy, this study emphasizes the significance of organized digital interventions in raising the standard of living for daily wage workers.

#### G. Multi-Modal Accessibility and Machine Learning in Job Matching

In their study Deshmukh et al. [11] present a comprehensive job-matching platform that aims to close the gap between daily wage workers and employers, particularly for those who are not smartphone users or have low levels of computer literacy. This system uses USSD (Unstructured Supplementary Service Data) and IVR (Interactive Voice Response) to allow workers with simple mobile phones to look for and apply for employment, in contrast to traditional platforms that require internet connectivity. The platform uses machine learning methods like Content-Based Filtering for individualized matching and K-Nearest Neighbours (KNN) for accurate job recommendations in order to increase the efficiency of job matching. By using real-time geolocation services, job recommendations are further refined, guaranteeing that employees locate employment prospects in their immediate vicinity. This research highlights the primary advantages of this approach, which consist of reduced reliance on intermediaries, improved accessibility, and immediate job updates. By adopting a multimodal communication approach, the platform ensures that job seekers from diverse backgrounds can participate in the digital job market without encountering technological barriers.

### III. DISCUSSION AND FUTURE RESEARCH DIRECTIONS

The review highlights the urgent need for more accessible and effective job-matching platforms that address the specific challenges faced by unskilled and semi-skilled daily wage workers. Existing platforms primarily serve skilled professionals, leaving a significant gap in employment accessibility for low-income workers. To bridge this gap, future research should focus on the following areas:

- Integrating mobile-friendly, inclusive platforms that require minimal digital skills for participation by workers with limited access to technology
- Improving real-time job allocation and wage transparency to guarantee equitable remuneration.
- Integrating financial planning tools that help workers manage irregular incomes, improving financial security.
- Strengthening trust-building procedures through verification and rating systems to safeguard workers against exploitation.

- Leveraging AI-driven job-matching algorithms that can better align job opportunities with worker skills and location, ensuring higher efficiency and employment stability.

Digital job-matching platforms can move toward more fair, inclusive, and sustainable employment ecosystems by putting these solutions into practice, thereby providing effective support for daily wage workers in the changing gig economy.

### IV. CONCLUSION

The emergence of digital job-matching platforms has significantly influenced the employment landscape, providing greater accessibility and flexibility in work opportunities. However, these platforms remain largely ineffective for daily wage workers due to entry barriers, digital literacy gaps, and employment instability. While existing platforms efficiently serve skilled professionals and freelancers, they fail to address the unique challenges faced by unskilled and semi-skilled workers, who often rely on informal hiring networks. The absence of structured hiring systems, wage transparency, and trust mechanisms further exacerbates employment challenges, leaving many workers dependent on intermediaries with little control over job security and fair compensation.

To bridge this gap, future digital employment platforms must focus on inclusivity, accessibility, and fairness. Developing mobile-friendly, low-tech solutions tailored to workers with limited digital literacy is crucial. Additionally, integrating AI-driven job-matching algorithms, transparent wage structures, and financial security measures can enhance employment stability and prevent exploitation. Strengthening trust mechanisms through rating and verification systems will further improve worker-employer interactions, ensuring equitable opportunities.

For a truly sustainable and inclusive gig economy, future digital platforms must incorporate real-time job allocation methods, structured wage policies, and robust regulatory safeguards to protect worker rights. Policymakers and platform operators should collaborate to establish fair employment standards that guarantee job security, financial protection, and equal access to digital job opportunities. By closing the digital employment gap, these platforms can empower daily wage workers, ensuring they are not left behind in an increasingly technology-driven labour market. Future research should focus on refining these solutions to create a balance between technological advancements and accessibility, ensuring that gig economy platforms serve all categories of workers, regardless of skill level or digital proficiency.

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