

Short Term Job Hub - A Platform Connecting Job Seekers and Providers for Short Term Opportunities

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Abstract: *The current job market often overlooks the unique needs of short-term job seekers and providers, with most platforms and recruitment processes geared towards long-term employment, resulting in inefficient and time-consuming experiences for those seeking or offering temporary work. Short Term Job Hub stands out by specifically catering to this niche with a dedicated, user-friendly platform developed using Django. The platform offers comprehensive job listings with advanced filtering options, secure user authentication, detailed profile management, and seamless job posting capabilities. Users can easily search and apply to various short-term job opportunities, while providers can efficiently post and manage job listings. Utilizing advanced technologies such as Natural Language Processing for precise job matching and cryptographic algorithms for data security, Short Term Job Hub ensures an efficient, secure, and responsive environment. This focus on streamlining the short-term employment process helps bridge the gap in the market, making it easier for job seekers to find suitable opportunities and for providers to connect with qualified candidates quickly and effectively*

Keywords: Short-term employment, Job search platforms, Gig economy solutions, Labor market expansion, Dynamic job listings

1. Introduction

When in the dynamic job market of today, the need for short-term employment opportunities is on the rise. However, the existing job platforms and recruitment processes are predominantly focused on long-term positions, leaving short-term job seekers and providers with limited options and inefficient processes. This scenario calls for a specialized solution that can bridge the gap and cater to the specific needs of short-term employment. **Short Term Job Hub** emerges as a dedicated platform designed to streamline the process of finding and offering short-term jobs, making it easier and more efficient for both job seekers and providers.

Short Term Job Hub is a cutting-edge web-based platform developed using Django, meticulously designed to cater to the unique requirements of short-term employment. The platform offers a user-friendly interface, ensuring that both job seekers and job providers can navigate and utilize its features with ease. Key functionalities include comprehensive job listings with advanced filtering options, allowing users to search for jobs based on criteria such as job type (technical or non-technical) and date. Secure user authentication and detailed profile management ensure that users can safely and effectively manage their personal information.

The platform also simplifies the job posting process for providers, enabling them to add detailed job postings with essential information.

It leverages Natural Language Processing (NLP) for accurate job matching and employs cryptographic algorithms to ensure robust data security, delivering a dependable and efficient solution for short-term employment requirements.

2. Literature Review

People are increasingly opting for temporary occupations over long-term ones. Employees & employers. Profit from quick work because of its flexibility. Many job searchers aim for long-term employment. however, working on a temporary or short-term basis may help advance one's career and bring other advantages.

A short-term job, often referred to as temporary work or gig work, is a type of employment that lasts for a limited period. These jobs can range from a few hours or days to several months but are not intended to be permanent positions. Short-term jobs can be found across various industries and can involve different types of work, including freelance projects, seasonal work, contract positions, and temporary assignments [1].

The Gig Economy and Short-term Employment:

Short-time work was introduced during the period as a special arrangement with the aim of reducing unemployment hikes by offering firms the possibility of adjusting the working time of specialized workers rather than adjusting the size of their workforce. The authors focus on the effect of short-time work at the individual level of the worker and study whether short-time program participants in surviving firms had a lower job turnover rate and transition rate to unemployment compared to workers who did not participate in the program [2].

Short-time work and labor market flexibility:

Labor market flexibility can also contribute to achieving a better work-life balance for employees. Flexible work arrangements, such as part-time work, telecommuting, and flexible schedules, enable individuals to meet personal obligations while remaining active in the labor market. This flexibility can be particularly beneficial for working parents, individuals pursuing further education, or those with caregiving responsibilities. For instance, offering flexible

working hours can attract a more diverse talent pool and improve employee retention rates [3]. Labor market flexibility brings numerous advantages, including increased job opportunities, enhanced competitiveness and innovation, improved productivity and efficiency, optimal matching of skills and job requirements, economic resilience, and the ability to balance work-life demands. While some argue that labor market flexibility may lead to job insecurity or exploitation, it is essential to strike a balance between flexibility and worker protections to ensure fair and equitable labor market practices [4].

Job crisis in India:

While a 'gig', when loosely defined, means "working part-time for money", the dictionary meaning of a gig economy is "a labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs". Jagannathan, in chapter 'Jobs or Gigs? What will be the future like', ponders on the pros and cons of a gig economy. However, he explains why a gig economy is not for all, and how the cost here might sometimes outweigh the benefits [5]. India has become one of the world's top places for gig workers, ranking fifth - the USA, China, and Brazil, being the top three. Approximately 15 million skilled individuals are engaged in freelance work, representing nearly 40 percent of freelancers worldwide. Experts are predicting a growth rate of 17 percent each year and reaching an estimated value of \$455 billion by 2024. This growth might be twice as fast as experts thought before the pandemic. By 2025, it's predicted that there could be 350 million gig jobs in India [6]. Although India's gig economy is booming, those employed at the bottom of the pyramid are subject to extremely difficult conditions. A recent multi-city survey, which covered over 10,000 cab drivers and delivery persons in cities, highlights several facts about the persisting issues in this particular sector which include long working hours, earnings that fall short of meeting household expenses, arbitrary deactivation and blocking of identity (ID) by platforms, and high physical and mental stress etc. [7].

Regulatory Framework and the Protection:

The government introduced four labour codes to extend benefits to workers in the unorganized sector. Among these, the Code on Social Security, 2020 was enacted based on the recommendations of the Second National Labour Commission, consolidating nine existing laws. The Code also defines an "Unorganized Worker" under Section 2(86)12, "self-employed worker" under Section 2(75), and "platform worker" under Section 2(61). Under Section 6 [mainly, Section 6(7)(a) and Section 6(7)(c)] of this code, a National Social Security Board is formed by the Central government which shall recommend the Central Government on framing suitable schemes for the unorganized workers to exercise the conferred powers, and to perform the assigned functions etc. [8].

Sari Sri Handani's research investigates the effects of wages, job characteristics, co-worker relationships, and supervision on workers' job satisfaction using questionnaire-based methods. The findings reveal that wages and job characteristics have a significant positive impact on satisfaction, highlighting the importance of fair compensation and meaningful work. While co-worker

relationships are positively rated, they show no significant impact on satisfaction, suggesting limited direct influence. Supervision, however, has a significant negative effect, indicating that poor leadership can detract from satisfaction despite other positive factors. Overall, wages, jobs, co-workers, and supervision collectively show a positive impact on satisfaction when analyzed simultaneously. The study emphasizes the need for a balanced management approach, addressing compensation, job design, workplace relationships, and leadership quality to cultivate a satisfied and motivated workforce. [9]. Recent legislative initiatives, including the Code on Wages, 2019, and the Code on Social Security 2020, indicate a forward-thinking stride in the direction of acknowledging and attending to the distinct requirements of freelance workers. The purpose of these protocols is to provide safeguards to individuals working in the gig economy. These protections will include minimum wage requirements, social security benefits, and accident compensation. Despite these developments, such protections continue to be inconsistently enforced, primarily due to the ever-changing nature of the freelance economy [10]. Moreover, while not explicitly crafted for the digital age, the Contract Labour Act, 1970 and the Employment Compensation Act, 1923 contain provisions that may potentially apply to contract workers. Nevertheless, the complete implementation or judicial scrutiny of their applicability to the contract economy remains elusive, thereby exposing a substantial segment of the labor force to exploitation and deprivation of fundamental labor rights [11].

The Future of Temporary Staffing in India:

The staffing landscape is fast changing with conventional permanent roles increasingly giving way to temporary roles across industries. Whether it's manufacturing or the service industry, companies are increasingly chalking out strategies to ramp up a temporary staffing workforce. For instance, India's formal temporary staffing grew at a compounded annual growth rate (CAGR) of 16.3% in 2022. India's temporary workforce count, which is around 5-5.5 million now, will likely reach 10 million by 2030, as per the President of the Indian Staffing Federation (ISF) [12]. Temporary staffing is defined by the name itself. It means filling up the workforce for short-term requirements. The economic surge and increasing popularity of remote work will likely help boost India's temporary staffing ecosystem. Many businesses in India opt for temporary workers to meet short-term requirements or manage seasonal spikes in demand. This has led to an increase in demand for temp workers across various sectors. The temporary staffing industry's growth in India can be attributed to the rising demand for a flexible workforce among businesses. Companies are increasingly seeking temporary or contract workers to meet their staffing requirements, which allows them to adjust their workforce size and composition quickly based on changing market conditions [13]. With the rise of the gig economy and the increasing need for a flexible workforce, the demand for temporary staffing services in India is expected to grow in the coming years. This presents a significant opportunity for the industry to expand and mature further [14].

Ognjenović and Branković (2012) examine the effects of the 2008 global economic crisis on job creation and employment in Serbia. They find that while job creation and destruction

are nearly balanced at 7.6% annually, the crisis led to GDP contraction, rising unemployment, and negative employment growth. Micro and small enterprises played a key role in enterprise growth but had limited capacity to expand employment significantly. The study highlights Serbia's structural vulnerabilities and calls for targeted strategies to stabilize employment and promote enterprise growth during economic instability.

Caliendo, Hujer, and Thomsen (2008) assess the employment effects of job-creation schemes (JCS) in Germany, focusing on long-term unemployed and hard-to-place individuals. Using detailed administrative data, the study evaluates medium-term impacts, regular employment outcomes, and estimator sensitivity. The findings indicate that JCS have negative or insignificant effects on employment for most participants, except for long-term unemployed individuals, who benefit toward the program's later stages. The study suggests targeting JCS more closely at this group to improve their effectiveness.

Clark (1996) discusses the increasing use of short-term contracts in organizations, particularly in fields like archives and research. These contracts provide flexibility to address short-term needs but have led to a decline in permanent positions. While temporary roles offer benefits such as fresh perspectives and the ability to meet specific targets, they also result in job insecurity and hinder career progression. The reliance on short-term contracts raises concerns about the long-term sustainability of stable employment opportunities. Behagen, Crepon, and Gurgand (2014) compare public and private job counseling programs through a large-scale controlled experiment. Although the private program enrolled more participants, the public program had a greater impact per beneficiary. The study suggests that private providers face challenges in effectively mastering counseling techniques and have incentive issues, potentially affecting the quality of their services. These findings underscore concerns about the effectiveness of private-sector delivery in job counseling programs, especially in terms of designing contracts that prioritize long-term success over short-term metrics.

Miller and Terborg (1979) examine the job attitudes of part-time and full-time employees, focusing on how job status, sex, and tenure influence satisfaction across various factors such as work, pay, benefits, and advancement. The study, involving 399 full-time and 665 part-time clerical employees, finds that part-time workers are generally less satisfied than full-time employees, even after controlling for sex and tenure. This dissatisfaction is attributed to limited opportunities for career advancement, benefits, and job security for part-time employees.

The study highlights the importance of understanding the context in which these attitudes are shaped and suggests future research into social comparisons and partial inclusion

to explore how part-time workers perceive their roles within the organization. The authors advocate for targeted interventions to address the specific needs of part-time workers, who may face challenges distinct from those of full-time employees.

3. Problem Statement

Short-term job seekers face significant challenges, often seeking flexibility, exploring new industries, or bridging employment gaps. The rise in unemployment has worsened the situation, leading to fewer opportunities. Availability of short-term jobs is inconsistent due to seasonal or project-based work, influenced by market demand, budgets, and the number of job seekers. These roles often come with demanding workloads and significant responsibilities, yet the compensation may not always align. Although practical skills and a positive mindset are valuable, formal qualifications are not always essential. This underscores the necessity of a platform to tackle the distinct challenges faced by both short-term job seekers and employers.

3.1 Objectives

The objectives of the proposed project are as follows:

- 1) Establish a platform to connect job seekers with employers offering short-term employment opportunities.
- 2) Provide flexible work options for students, freelancers, and individuals transitioning between jobs.
- 3) Enable job seekers to gain valuable experience, develop new skills, and enhance existing ones through short-term employment.
- 4) Support daily-wage and temporary workers in meeting their immediate financial needs and fulfilling commitments.
- 5) Offer opportunities for individuals to earn extra income to supplement their primary earnings and achieve specific financial goals.

4. Methodology and Architecture

The theory behind creating a short-term job hub integrates several methodologies to efficiently match job seekers with temporary employment opportunities. At its core, algorithmic matching uses advanced algorithms and machine learning to align candidates with jobs based on their skills, experience, and preferences, enhancing job matching efficiency and accuracy. The development of mobile and web-based platforms improves accessibility, allowing users to browse, apply for, and manage job listings easily, catering to the demand for mobile job searching. Additionally, verification and vetting processes ensure job seekers' reliability and competency, building trust with employers and improving job quality. These methodologies collectively streamline the hiring process and ensure a high-quality experience for both employers and workers.

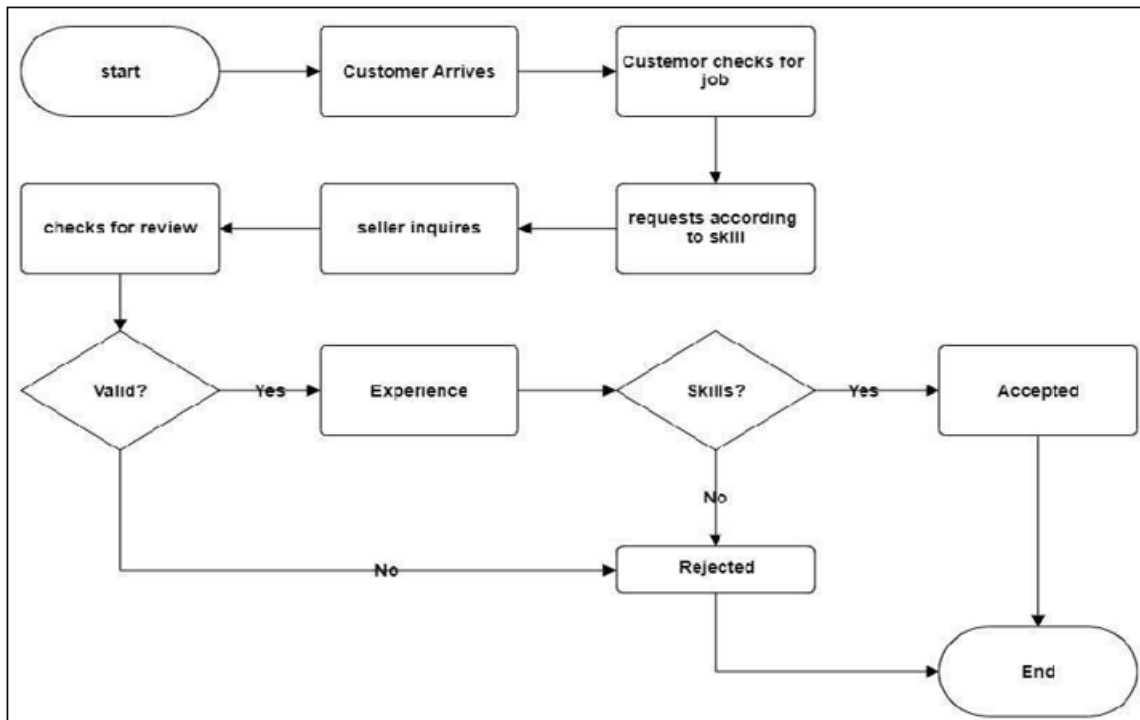


Figure 1: Architecture of the proposed system

Architecture of proposed Model

The proposed system begins by collecting and processing job listings and user profiles. It then uses filtering and matching algorithms to align job seekers with suitable short-term opportunities. Users input their job preferences or search criteria, after which the system retrieves and processes

relevant job listings, presenting the best-matched opportunities.

5. Result and Analysis

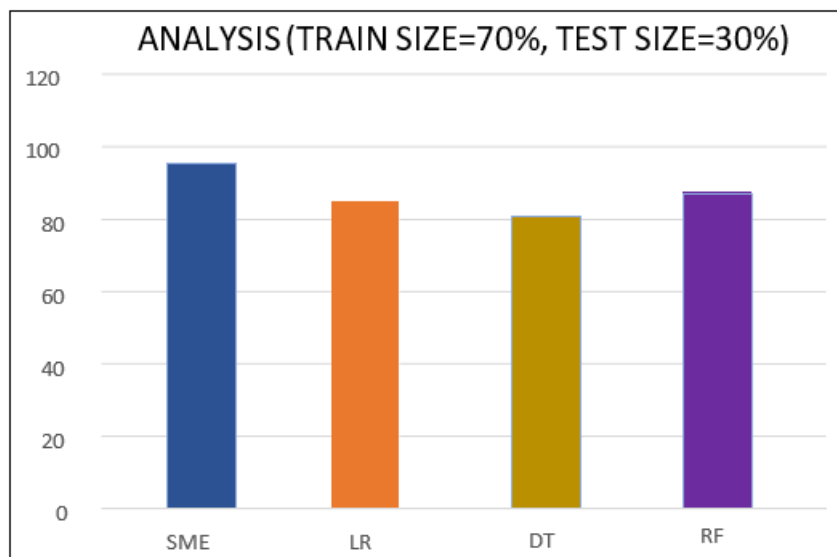


Figure 2: Graph analysis of the data set.

The bar graph presents the accuracy analysis of four different algorithms, evaluated with a training set size of 70% and a testing set size of 30%. The comparison shows that the Smart Match Engine consistently outperformed the other algorithms in all cases, achieving the highest accuracy across various scenarios. Each algorithm’s performance is visualized to highlight differences in effectiveness, with the Smart Match Engine clearly leading in all instances. This indicates that the Smart Match Engine is the most reliable and precise in matching job seekers with suitable opportunities. The analysis demonstrates its superior ability to process and match data,

establishing it as the optimal choice compared to the other algorithms tested.

6. Conclusion

The Short-Term Job Hub effectively addresses the challenges faced by both job seekers and providers in the short-term employment market. By offering a streamlined platform that facilitates job searching and posting, the system improves the efficiency and accessibility of short-term job opportunities.

The platform's advanced filtering, user-friendly interface, and secure authentication contribute to a seamless experience for users. As the job market evolves, the Short-Term Job Hub is well-positioned to adapt and enhance its features, ensuring that it remains a valuable resource for short-term employment. Overall, the Short-Term Job Hub not only simplifies the process of finding and offering short-term jobs but also lays the groundwork for future advancements in job matching and user engagement.

7. Scope for Future Work

Several opportunities exist to further enhance the Short-Term Job Hub. First, integrating more sophisticated matching algorithms and incorporating machine learning techniques could improve the precision of job recommendations and user profiles. Second, expanding the platform's capabilities to include features such as real-time job notifications and automated application tracking would provide users with more timely and relevant information. Lastly, incorporating feedback mechanisms and user analytics could help refine the platform's functionalities, ensuring it continually meets the evolving needs of job seekers and providers. By exploring these enhancements, the Short-Term Job Hub can further solidify its role as a leading solution in the short-term job market.

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