Task Mitra: A Smart Local Service Platform Using Web Technologies

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Abstract

In the rapidly evolving digital world, the demand for efficient and reliable service platforms has increased significantly. However, the local service sector, which includes daily wage workers such as electricians, plumbers, carpenters, and technicians, still remains largely unorganized. Customers often face difficulty in finding trusted service providers, while workers struggle to secure consistent job opportunities. This paper introduces *Task Mitra*, a smart web-based platform designed to bridge this gap by connecting customers with local service providers through a centralized system.

The platform allows users to post tasks with detailed requirements, while workers can browse and apply for jobs based on their skills and availability. The system ensures secure authentication, efficient task management, and transparent communication between users. By leveraging modern technologies such as React, Node.js, and MongoDB, Task Mitra provides scalability, reliability, and improved performance. The platform also includes features such as rating systems, notifications, and dashboards to enhance user experience.

The proposed system demonstrates how digital transformation can improve accessibility, efficiency, and transparency in the local service ecosystem. Task Mitra not only benefits customers by reducing search time but also empowers workers by providing equal opportunities and increasing their visibility in the market.

Keywords: Task Mitra, Local Services, Web Application, MERN Stack, Job Portal, Skill Matching, Digital Platform

I. Introduction

The advancement of technology has transformed multiple industries, including education, healthcare, banking, and e-commerce. Digital platforms have made it easier for users to access services with just a few clicks. However, the local service sector continues to operate in a traditional manner, relying heavily on word-of-mouth communication and manual processes. This lack of digital integration leads to inefficiencies, delays, and limited opportunities for workers.

Local service providers, such as electricians, plumbers, and technicians, often struggle to find consistent work due to lack of visibility. On the other hand, customers face difficulties in identifying reliable service providers, especially during urgent situations. The absence of a centralized platform further complicates the process.

Task Mitra aims to address these challenges by providing a digital platform that connects customers and workers efficiently. The system allows users to post tasks and enables workers to browse and apply for jobs. By digitizing the local service ecosystem, Task Mitra improves accessibility, reduces dependency on manual methods, and enhances overall user experience.

II. Problem Statement

Despite the availability of various online service platforms, several challenges persist in the local service sector. One of the major issues is the lack of visibility for local workers. Many skilled workers remain unemployed or underemployed due to limited exposure and lack of opportunities.

Customers also face difficulties in finding trusted and verified service providers. In many cases, they rely on personal recommendations, which may not always be reliable or efficient. This process is time-consuming and lacks transparency.

Another major problem is the absence of a centralized system that can manage service requests and worker availability. Existing platforms often focus on large-scale services and may not be suitable for small-scale or rural workers due to high costs or complex processes.

Therefore, there is a need for a simple, efficient, and affordable solution that can bridge the gap between customers and local workers while ensuring reliability and ease of use.

III. Objectives

The primary objective of Task Mitra is to design and develop a platform that simplifies the process of finding and offering services. The system aims to create a digital ecosystem where both customers and workers can interact seamlessly.

The specific objectives of the system include providing equal opportunities for local workers by increasing their visibility and accessibility. It also aims to reduce the time and effort required for customers to find suitable service providers.

Another important objective is to ensure secure and reliable communication between users. The system incorporates authentication mechanisms and data protection techniques to maintain user privacy and security.

Additionally, Task Mitra focuses on enhancing user experience by providing a simple and intuitive interface. The inclusion of features such as ratings and reviews further improves trust and transparency within the platform.

IV. Literature Survey

Several platforms such as Urban Company and JustDial have been developed to provide online service solutions. These platforms offer a wide range of services and connect users with professionals. However, they mainly focus on organized sectors and often involve high service charges.

Research studies indicate that small-scale workers face challenges in adopting such platforms due to technical complexity and financial constraints. Many workers lack the necessary digital skills to use these systems effectively.

Moreover, these platforms may not adequately cover rural or semi-urban areas, where a significant portion of the workforce is located. As a result, many workers remain excluded from the benefits of digital platforms.

Task Mitra addresses these limitations by focusing on simplicity, affordability, and accessibility. The system is designed to be user-friendly and suitable for individuals with basic technical knowledge. It provides a lightweight solution that can be easily adopted by local workers and customers.

V. Proposed System

The proposed system, Task Mitra, is a web-based application that facilitates interaction between customers and service providers. The platform allows users to post tasks with details such as location, budget, and requirements. Workers can browse available tasks and apply based on their skills and availability.

The system consists of multiple modules, including user registration, authentication, task management, and notifications. Users can create accounts, log in securely, and manage their tasks efficiently. Workers can view job listings and apply for suitable tasks.

A rating and review system is also implemented to ensure quality and reliability. Customers can provide feedback based on their experience, which helps other users make informed decisions.

Overall, the proposed system provides a comprehensive solution for managing local services in a digital environment.

VI. System Architecture

The architecture of Task Mitra follows a three-tier model consisting of the presentation layer, application layer, and data layer.The presentation layer is developed using React, which provides a dynamic and interactive user interface. It ensures a smooth user experience and responsive design.

The application layer is built using Node.js and Express.js. This layer handles business logic, processes user requests, and communicates with the database.The data layer uses MongoDB to store user information, task details, and transaction records. MongoDB provides flexibility and scalability, making it suitable for dynamic applications.

The communication between these layers is facilitated through RESTful APIs, ensuring efficient data transfer and system performance.

VII. Methodology

The development of Task Mitra follows the Agile methodology, which emphasizes iterative development and continuous improvement. The project is divided into multiple phases, including requirement analysis, system design, implementation, testing, and deployment.

During the requirement analysis phase, the needs of users and workers are identified. The system design phase focuses on creating the architecture and defining system components.

The implementation phase involves coding and integrating different modules. Testing is conducted to identify and fix errors, ensuring system reliability.

Finally, the deployment phase involves launching the system for real-world use. Continuous feedback is collected to improve the system further.

VIII. Implementation

The implementation of Task Mitra involves the integration of frontend and backend technologies. The frontend is developed using React, which provides a responsive and user-friendly interface.

The backend is implemented using Node.js and Express.js, which handle server-side operations and API requests. MongoDB is used as the database for storing user and task information. Security is a key aspect of the implementation. Passwords are encrypted using Bycrypt, and OTP-based authentication is used to verify users.

The system also includes features such as dashboards, notifications, and real-time updates, which enhance user experience and functionality.

IX. Results and Discussion

The developed system was tested with multiple users to evaluate its performance and usability. The results indicate that Task Mitra significantly reduces the time required to find services.

Users reported improved satisfaction due to the ease of use and quick response time. Workers were able to find more job opportunities, leading to increased productivity. The system also demonstrated scalability and reliability, making it suitable for real-world applications. Overall, Task Mitra proved to be an effective solution for managing local services.

X. Advantages

Task Mitra offers several advantages, including easy access to local services and improved visibility for workers. The platform is user-friendly and requires minimal technical knowledge. It also provides a secure and reliable environment for communication between users. The scalable architecture ensures that the system can handle increasing user demands.

XI. Limitations

Despite its advantages, the system has certain limitations. It requires internet connectivity, which may not be available in all areas. Initial user adoption may also be slow due to lack of awareness.

Additionally, the system currently supports limited features, which can be expanded in future versions.

XII. Future Scope

Future enhancements for Task Mitra include the integration of artificial intelligence for skill matching and recommendations. The system can also include a payment gateway for secure transactions.

The development of a mobile application will further improve accessibility. GPS-based tracking can be implemented to provide location-based services.

XIII. Conclusion

Task Mitra provides a practical and efficient solution for connecting local service providers with customers. By leveraging modern web technologies, the system enhances accessibility, transparency, and efficiency.

The platform benefits both users and workers by simplifying the process of finding and offering services. With further improvements, Task Mitra has the potential to become a widely used platform in the local service industry.

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