**A**

**PROJECT REPORT**

**ON**

**“WORKER’S HUB”**

**SUBMITTED TO**

**SHIVAJI UNIVERSITY, KOLHAPUR**

**IN THE PARTIAL FULFILLMENT OF THE REQUIREMENT**

**FOR THE AWARD OF DEGREE**

**BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**

**SUBMITTED BY**

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**UNDER THE GUIDANCE OF**

**Mr. S. P. Pise**



**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE ENGINEERING**

**DKTE SOCIETY’S TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI**

**(AN EMPOWERED AUTONOUMOUS INSTITUTE)**

**2024-2025**

**D.K.T.E. SOCIETY’S**

**TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI**

**(AN EMPOWERED AUTONOUMOUS INSTITUTE)**

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE ENGINEERING**



**CERTIFICATE**

**This is to certify that, project work entitled**

**“WORKER’S HUB”**

**is a bonafide record of project work carried out in this college by**

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**is in the partial fulfillment of award of degree Bachelor of Technology in Artificial Intelligence and Data Science Engineering prescribed by Shivaji University, Kolhapur for the academic year 2024-2025.**

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**DECLARATION**

We hereby declare that, the project work report entitled “<<project title>>” which is being submitted to D.K.T.E. Society’s Textile and Engineering Institute Ichalkaranji, affiliated to Shivaji University, Kolhapur is in partial fulfillment of degree B.Tech.(AI & DS). It is a bonafide report of the work carried out by us. The material contained in this report has not been submitted to any university or institution for the award of any degree. Further, we declare that we have not violated any of the provisions under Copyright and Piracy / Cyber / IPR Act amended from time to time.

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Thank you,

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**ABSTRACT**

In today’s digital age, connecting skilled workers to people in need of their services remains a challenge, especially in local regions. “Worker’s Hub” is a web-based platform designed to bridge this gap by enabling users to discover nearby skilled workers like electricians, plumbers, carpenters, and more, based on geographic proximity and specified working areas. The system leverages geolocation and smart filtering to connect users with the most suitable professionals. It includes user-friendly features for registration, profile management, skill tagging, and real-time location-based search functionality. This project aims to digitize and simplify local labor discovery and create more visibility for skilled workers in local communities.

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**1. Introduction**

1. **Problem definition**

Locating reliable, nearby skilled workers for specific jobs can be time-consuming and inefficient, especially in rural and semi-urban areas. Most people still depend on word-of-mouth or classified ads, which lack reliability and accessibility.

1. **Aim and objective of the project**

 To develop a responsive web application that helps users find skilled workers based on location and working areas.

 To allow workers to register, showcase their skills, and set their working radius.

 To integrate geolocation services for efficient proximity-based searches.

 To provide user reviews and ratings for transparency.

1. **Scope and limitation of the project**

 The system will target small towns and cities initially.

 Limited to internet users only.

 Real-time location tracking is approximated based on the area selected by the worker, not live GPS.

**2. Background study and literature overview**

1. **Literature overview**

In recent years, the demand for localized digital platforms to connect service seekers with service providers has seen significant growth. Several studies and projects have addressed service aggregation, freelancing platforms, and marketplace applications, but a gap still exists when it comes to location-based discovery of workers in semi-urban and rural areas.

1. **Investigation of current project and related work**

The Worker'sHub project is inspired by the need for a localized, easy-to-use digital platform where users can find skilled workers nearby based on their working areas. To better understand the problem and design a relevant solution, a detailed investigation into existing systems and their methodologies was conducted.

**Current Project Overview**

Worker'sHub is a web-based platform designed to:

* Enable skilled workers (like electricians, plumbers, etc.) to register and set their working areas.
* Allow users to search for nearby workers based on service needs and geographic location.
* Improve visibility and digital presence of workers without requiring them to go through complex sign-up processes or pay high platform fees.

**3. Requirement analysis**

1. **Requirement Gathering**

 Worker registration with profile, skills, and preferred working locations.

 Map-based or dropdown-based location filtering.

 Search functionality for users to find nearby workers by skill**.**

1. **Requirement Specification**

**** Frontend: HTML, CSS, JavaScript

 Backend: PHP

 Database: SQL

1. **Use case Diagram**

User visit website

|

V

Searches for a service

|

V

Views nearby workers

|

V

Contacts worker

Worker registers

|

V

Adds working area

|

V

Gets listed for relevant searches

**4. System design**

1. **Architectural Design**

The architectural design defines the high-level structure of the system, its components, and how they interact. For the Worker’s Hub, we can use a 3-tier architecture:

1. Presentation Layer (Frontend)

Interface for users (Users and Workers)

Technologies: HTML, CSS, JavaScript, Bootstrap

Functions: User interaction, form submission, displaying workers data

2. Application Layer (Backend)

Handles business logic and processes

Technologies: PHP

Functions: Authentication, data validation, workers availability, search filtering

3. Database Layer

Manages data storage and retrieval

Technology: MySQL

Tables: Workers

[User or Worker]

|

Frontend

|

Backend

|

Database

1. **Flow Chart**

**Worker Registration**

**|**

**Worker sets skill and working area**

**|**

**User searches skill + location**

**|**

**Backend filters and returns nearby results**

1. **System Modeling**

1. **Dataflow Diagram**

START

|

User or worker visite website

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| |

User searches skill + location Worker registeration

| |

| |

Backend filters and returns nearby results Successful registration

|

|

Update profile

**5. Implementation**

1. **Agile Methodologies**

Divided into multiple sprints:

* Sprint 1: Basic UI + Authentication
* Sprint 2: Worker module
* Sprint 3: Search feature

1. **Development Model**

The development model used in this project was based on the Iterative Model, which

emphasizes breaking down the project into smaller, manageable sections or modules. This approach works well with Agile practices, providing flexibility for continuous development and improvement. Here’s how it was applied to the Worker’s Hub:

1. Initial Planning and Requirement Analysis

Before development began, a detailed requirements analysis was done to understand the needs of the workers and people.

A roadmap was created, listing out the features that needed to be implemented for the

worker search and management platform.

2. System Design (Iteration 1)

In the first sprint, the architectural design was finalized, including the database schema,

user roles, and features.

The basic UI/UX design was created, ensuring a user-friendly experience for workers and users.

**6. Future Scope**

* Mobile application integration
* Real-time GPS tracking
* Chat functionality between user and worker
* Subscription models for premium visibility for workers

**7. References (public repository GitHub source code links)**

**https://github.com/Shreyas6451/Workers-Hub.git**