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## Lavork - A Location-Based Task Marketplace Platform

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### Abstract

In today's fast-paced and service-driven society, individuals often require assistance with everyday tasks, ranging from household chores to technical services. However, finding reliable help locally is often time-consuming and inefficient. This project presents the development of "**Lavork – A Location-Based Task Marketplace Platform**", a modern web application that connects users seeking help with nearby service providers, promoting flexible work opportunities and efficient service exchange within communities.

The platform is designed using the **MERN stack**—MongoDB, Express.js, React.js, and Node.js—and integrates **Google Maps API** for real-time location discovery. Lavork enables users to post tasks, apply for tasks, track task status, and complete assignments with a built-in review and rating system to ensure trust and transparency. Tasks can be filtered by category, budget, distance, and completion status.

The frontend is developed with **React and Tailwind CSS**, enhanced with **Framer Motion** for dynamic user experience, while the backend ensures secure operations using **JWT-based authentication** and **bcryptjs** for encrypted password handling. Task and user data is managed using MongoDB, supporting quick retrieval with indexing and query optimization.

Lavork also includes features like **location-based task discovery**, **budget negotiation**, and **user reputation tracking**, enhancing both usability and accountability. Future enhancements include real-time messaging, payment gateway integration, and AI-based task recommendations. By leveraging modern web technologies and geolocation services, Lavork delivers a scalable, secure, and intuitive solution for on-demand task fulfillment and community-based employment.

# Chapter 1

## Introduction

### 1.1 Overview

**Lavork** is a location-based task marketplace platform developed to connect individuals who need tasks completed with nearby service providers. The platform aims to bridge the gap between task posters (individuals or small businesses) and task workers (freelancers or part-time workers) through an intuitive and secure web application.

Using the **MERN stack (MongoDB, Express.js, React.js, Node.js)** and **Google Maps API**, Lavork enables users to discover tasks within their vicinity, apply for them, assign them, and complete them — all within a transparent workflow that includes user reviews and ratings. The system also integrates features like category-based filtering, budget negotiation, and location-based task tracking.

### 1.2 Aim/Motivation

The primary aim of Lavork is to develop a community-driven, hyperlocal task marketplace that promotes flexible employment opportunities while helping users get tasks done easily and affordably.

The motivation behind Lavork stems from the growing need for platforms that cater to short-term, location-based task fulfillment — such as home repairs, delivery assistance, tutoring, and other freelance jobs. Most existing platforms are either too generic or too professionalized, leaving out the everyday user. Lavork is designed to address this gap by creating a user-friendly, real-time task exchange platform that empowers local communities.

### 1.3 Objective

- 1. Build a Task Marketplace Platform**  
Design and develop a full-stack web application where users can post and browse tasks based on real-time location data.
- 2. Implement Secure Authentication**  
Ensure secure registration, login, and role-based access using JWT and password hashing techniques.
- 3. Integrate Google Maps API**  
Provide map-based task visualization and filtering within a specified radius of the user's current or selected location.
- 4. Enable Filtering and Search**  
Implement advanced filters by category, price range, location, and task status to improve discoverability.
- 5. Support Reviews and Reputation**  
Allow users to rate and review each other post-task completion to build trust within the community.
- 6. Create a Scalable Backend**  
Use MongoDB and Express.js to handle a growing number of users and tasks efficiently.

## 7. Ensure Responsive and Mobile-Friendly UI

Design the frontend using React and Tailwind CSS with Framer Motion for a smooth and intuitive user experience.

### 1.4 Organization of Report

The organization of this project report for **Lavork – A Location-Based Task Marketplace Platform** is structured as follows:

#### Chapter 1: Introduction

Introduces the project, its motivation, core objectives, and gives an overview of the structure of this report.

#### Chapter 2: Literature Survey

Reviews existing task and service-based platforms (like TaskRabbit, UrbanClap, etc.), discussing their features, limitations, and how Lavork fills the gap.

#### Chapter 3: Problem Statement

Describes the challenges users and gig workers face when accessing or offering location-based services and how Lavork provides a simplified and effective solution.

#### Chapter 4: Software Requirements Specification

Lists the required software, hardware, programming languages, APIs, and databases used in the development of the Lavork platform.

#### Chapter 5: System Design

Explains the system architecture, use case diagrams, activity diagrams, database schema, and UI/UX layouts.

#### Chapter 6: Conclusion and Future Scope

Evaluates the success of the project and suggests possible future enhancements such as mobile app versions, chat integration, and AI-based task matching.

#### References

Contains all the sources, articles, APIs, and documentation used throughout the development of this project.

## Chapter 2 Literature Survey

### 2.1 Introduction

A literature survey involves the study and evaluation of existing technologies, platforms, and research works related to the proposed system. In the context of Lavork, various task-based marketplaces, freelance service platforms, and location-aware applications were examined to understand their features, strengths, and limitations. This helped identify key gaps and areas where Lavork can provide unique value.

### 2.2 Related Platforms and Technologies

#### TaskRabbit

TaskRabbit is a popular task outsourcing platform that connects users with local service providers. It offers features such as booking, messaging, and payments. However, it caters primarily to metropolitan areas and has a limited presence in developing countries.

Strengths: Strong brand recognition, secure payments, and verified workers.

Limitations: High service fees, limited reach in non-urban areas, and restricted task categories.

### **UrbanClap (now Urban Company)**

UrbanClap provides professional services such as home cleaning, repair, and beauty treatments. It follows a business-to-customer (B2C) model and operates with verified professionals.

Strengths: Verified service providers, app-based interface, and predefined pricing.

Limitations: Lacks task flexibility for one-time small gigs; onboarding process for providers is long and rigid.

### **Fiverr & Freelancer**

These platforms focus on digital and freelance services like design, writing, and development. Though global in scope, they do not support physical or location-based tasks.

Strengths: Access to global clients, varied task categories.

Limitations: Not suitable for local or physical task needs; lacks location-aware filtering.

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## **2.3 Identified Gaps**

From the platforms reviewed, the following common issues were observed:

Limited support for hyperlocal tasks that are informal, one-time, or spontaneous.

Absence of real-time map integration for visualizing nearby job/task opportunities.

Rigid workflows and lack of flexible application-based task negotiation.

User interfaces that may not cater to first-time or non-tech-savvy users.

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## **2.4 Lavork's Unique Proposition**

Lavork differentiates itself through the following innovations:

**Real-Time Location Discovery:** Uses Google Maps API to display and filter nearby tasks dynamically.

**Two-Way Marketplace:** Serves both task posters and workers equally with role-based flows.

**Secure, Token-Based Authentication:** JWT-based login and access system for reliability.

**Modular, Scalable Tech Stack:** Built with the MERN stack, allowing for future features like payments, chats, and AI-based matching.

**Simplified UX/UI:** Designed using Tailwind CSS and Framer Motion for smooth, accessible interactions.

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## **2.5 Summary**

The literature reviewed demonstrates the existence of various service platforms, each with their own niches. However, there remains a strong need for a community-oriented, location-based, task-matching system that supports real-time interaction and flexibility. Lavork aims to fulfill this need with its scalable design, modern technologies, and focus on user experience.

## Chapter 3

### Problem Statement

The **Lavork platform** aims to address the inefficiencies and challenges individuals face in finding reliable help for day-to-day tasks and, conversely, the difficulty skilled workers encounter in discovering nearby job opportunities. Traditional job portals are either too formal, slow, or do not cater to hyperlocal, on-demand needs.

Existing task outsourcing platforms often lack real-time task discovery based on location, intuitive interfaces, or a scalable backend to handle dynamic task flows. Users frequently struggle to find trusted task workers quickly, and freelancers or gig workers find it difficult to advertise their availability for small, local jobs.

**Lavork** seeks to eliminate these gaps by offering a scalable, map-based platform with an efficient task matching system, role-based authentication, and community-driven trust through ratings and reviews.

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#### 5W Analysis:

- **Who:**

- Task Posters: Individuals and small businesses needing reliable, local help.
- Task Workers: Freelancers, students, and skilled individuals seeking flexible work.

- **What:**

- A location-aware task marketplace platform where users can post, search, apply for, and manage tasks based on skill, category, and location.
- Includes map integration, reviews, role-based dashboards, and secure login.

- **Where:**

- The platform is accessible as a web application via browsers, with plans to extend to mobile apps in the future (Android/iOS).

- **When:**

- The project is developed over a 3-month timeline with iterative reviews. Launch and testing occurred during the final development sprint.

- **Why:**

- To provide a fast, efficient, and community-driven way for people to find help or jobs nearby.
- To support the gig economy and empower users with flexible work and transparent reviews.
- To leverage modern technology (MERN stack + Google Maps API) for real-time, responsive task matching.

## Chapter 4

# Software Requirements Specification

### 4.1 Hardware Requirements

The following hardware components are necessary for the development, deployment, and smooth operation of the **Lavork task marketplace platform**:

- **Server**: Node.js-compatible server or cloud hosting environment (e.g., **Render, Vercel, Heroku, AWS, or Google Cloud**).
- **CPU**: Multi-core processor (**Intel Core i5 or higher**, or equivalent AMD processor) for handling concurrent user requests.  
**RAM**: Minimum **8 GB RAM** for development and real-time processing of data and API requests.
- **Storage**: **256–512 GB SSD** recommended for fast read/write operations and local development environment.
- **Network**: High-speed internet connection (**100 Mbps or more**) for live deployment, testing, and API integration.
- **Database Server**: Cloud-based NoSQL database services such as **MongoDB Atlas**.
- **Backup System**: Automated cloud backups using MongoDB Atlas, GitHub version control, and regular data dumps.

### 4.2 Software Requirements

The following software tools and libraries are used for building and running the Lavork platform:

- **Operating System**: Cross-platform compatible (Windows 10/11, macOS Ventura or later, Ubuntu 22.04+).
- **Frontend Technologies**:
  - **React.js** (v19.0.0) for building dynamic user interfaces
  - **Tailwind CSS** for responsive styling
  - **Framer Motion** for animations
  - **React Router** for navigation
- **Backend Technologies**:
  - **Node.js** (v18+) with **Express.js** for API development
  - **JWT** for secure token-based authentication
  - **bcryptjs** for password encryption

- **Database:**

- **MongoDB** (via **MongoDB Atlas**)
- **Mongoose** for Object Data Modeling

- **API Integration:**

- **Google Maps API** for real-time location and geocoding

- **Development Tools:**

- **Visual Studio Code**
- **Postman** for API testing
- **Git & GitHub** for version control and collaboration

- **Browser Compatibility:**

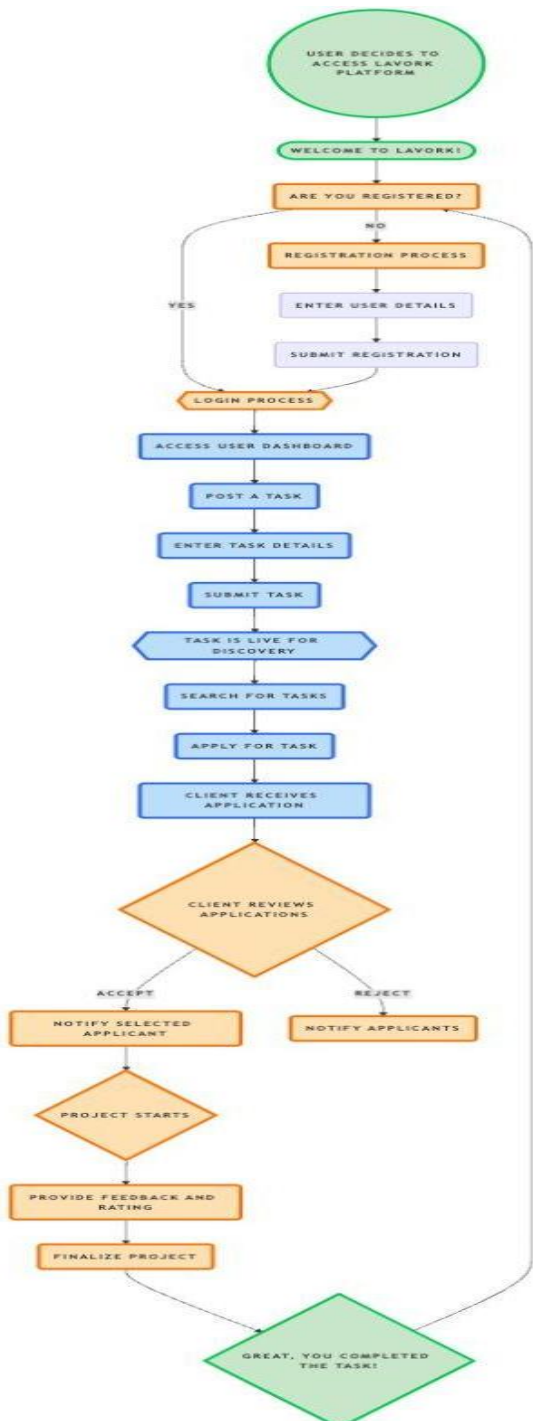
- Fully tested on **Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge**



# Chapter 5

## System Design

### 5.1 Project Block Diagram



## 5.2 GUL Working System

The GUI design of Lavork revolves around offering intuitive, real-time interactions between users (task posters and workers). The main components of the system workflow are:

### 1. User Interface (Frontend)

- Task Posting & Search Panel:
  - Users can post tasks with location, budget, and category filters
  - Service seekers can apply filters like price, location radius, or skill tags
- Interactive Map View:
  - Visual map-based task discovery using Google Maps
  - Users can zoom, pan, and click on task markers
- Task Application:
  - Workers can apply to posted tasks and receive confirmation
- User Dashboard:

- Users can manage posted tasks, view task history, and check rating profiles
- 
- 2. Web Server (Node.js + Express)**
  - Request Handling:
    - Receives API calls for login, task creation, task browsing, and application
  - Middleware:
    - Validates JWT tokens for user sessions
    - Logs actions for future analytics
- 3. Task Engine (Backend Logic)**
  - Task Filtering & Matching:
    - Matches users with nearby tasks based on location, category, and budget
  - Task Status Handling:
    - Updates task states from "Open" → "Assigned" → "In Progress" → "Completed"
  - Review Engine:
    - Handles submission and fetching of reviews and ratings
  -
- 4. Database (MongoDB Atlas)**
  - User Data:
    - Stores credentials, roles, location info, and profile details
  - Task Listings:
    - Stores task info, budget, category, location coordinates, and status
  - Applications:
    - Tracks who applied for which task, along with timestamps
  - Reviews & Ratings:
    - Stores user feedback and rating metrics

## 5. System Flow

Users login/register → Task Poster posts a task  
→ Workers browse tasks via filters or maps → Workers apply to tasks  
→ Poster assigns task → Task is completed → Both users rate each other

### Key Features Enabled by the Design:

- Real-time map-based task browsing
- Secure user authentication and session handling
- Role-based dashboards for posters and workers
- Interactive and responsive frontend design
- Task status tracking and application management
- Location-aware task discovery using Google Maps
- Review & reputation system after task completion

# Find Help. Earn Money. All in One Place.

Connect with people who can help you get tasks done, or earn money by helping others.

What service do you need?

All Locations

Search



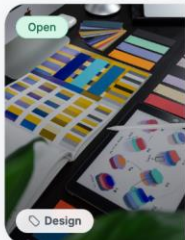
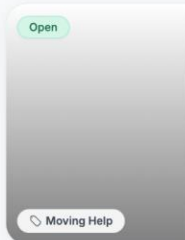
Browse Tasks

Post a Task

Quick Info

## Recently Posted Tasks

Check out the newest opportunities to earn money or find help

 <p>Completed</p> <p>Cleaning</p>	<h3>Home Deep Cleaning Service</h3> <p>Need a thorough cleaning of my 2BHK apartment including kitchen deep...</p> <p>Mumbai, Andheri East Due: Apr 11, 2025</p> <p>₹1200 Budget</p> <p>Cleaning Home Maintenance Posted: Apr 04, 2025</p>	 <p>Open</p> <p>Delivery</p>	<h3>Grocery Shopping and Delivery</h3> <p>Looking for someone to do weekly grocery shopping and deliver to my...</p> <p>Kothrud, Pune Due: Apr 07, 2025</p> <p>₹1200 Budget</p> <p>Reliable Attention to Detail Posted: Apr 04, 2025</p>
 <p>Open</p> <p>Design</p>	<h3>Food Delivery App UX Review</h3> <p>Looking for a UX designer to review our food delivery app prototype an...</p> <p>Remote Due: Apr 15, 2025</p> <p>₹15000 Budget</p> <p>UX Design App Design Posted: Apr 04, 2025</p>	 <p>Open</p> <p>Moving Help</p>	<h3>Moving Assistance Needed</h3> <p>Need help moving from a 2BHK apartment to a new house. Will...</p> <p>Pune, Maharashtra Due: Apr 10, 2025</p> <p>₹2500 Budget</p> <p>Physical Strength Careful Handling Posted: Apr 03, 2025</p>

View All Tasks →

### How Lavork Works

1

#### Post a Task

Describe what you need done, when you need it, and what you're willing to pay for the service.

2

#### Receive Offers

Review offers from skilled workers in your area who are ready to help with your task.

3

#### Get it Done

Choose the best person for the job, pay securely, and get your task completed to your satisfaction.

[Post Your First Task](#)

### Trusted by Thousands

Join our growing community of people getting things done through safe, secure, and reliable service exchange.



#### Secure Payments

All transactions are processed securely with multiple layers of protection for both parties.



#### Verified Reviews

Read honest feedback from real customers who have used our platform to complete tasks.



#### 24/7 Support

Our dedicated customer support team is available around the clock to assist you with any questions.

### Ready to get started?

Join thousands of satisfied users who are already using Lavork to get things done and earn extra income.

[Find Tasks](#)

[Post a Task](#)



Connect with people who can help you get tasks done, or earn money by helping others.



#### COMPANY

- [Home](#)
- [About Us](#)

#### SERVICES

- [Find Tasks](#)
- [Post a Task](#)
- [How It Works](#)
- [Pricing](#)

#### SUPPORT

- [Help Center](#)
- [Contact Us](#)
- [Terms of Service](#)
- [Privacy Policy](#)

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### Your Profile

Edit Profile

Name	Om Chandrakant Deo
Email	omdeo3105@gmail.com
Location	Pune
Bio	No bio provided
Skills	No skills listed
Rating	No ratings yet



Connect with people who can help you get tasks done, or earn money by helping others.



#### COMPANY

- Home
- About Us

#### SERVICES

- Find Tasks
- Post a Task
- How It Works
- Pricing

#### SUPPORT

- Help Center
- Contact Us
- Terms of Service
- Privacy Policy

### Post a New Task

Describe your task in detail to find the perfect person for the job.

**Task Title**  
e.g., Help me move my furniture

**Category**  
Select a category

**Description**  
Provide detailed information about the task...

**Budget (USD)**  
\$ 100.00

**Due Date**  
dd/mm/yyyy

**Location**  
Pune

**Required Skills (comma separated)**  
e.g., carpentry, painting, electrical

Cancel Post Task

### Tasks You Posted

Refresh Post a New Task

Posted Working On

**Grocery Shopping...** ₹1200 Budget

Looking for someone to do...

Kothrud, ... Due: Apr ...

Reliable

Attention to Detail

Apr Posted:04, 2025

+1 more

**Food Delivery...** ₹15000 Budget

Looking for a UX designer...

Remote Due: Apr 1...

UX Design

App Design

Apr Posted:04, 2025

+2 more

**Moving Assistance...** ₹2500 Budget

Need help moving from a...

Pune, Ma... Due: Apr 1...

Physical Strength

Careful Handling

Apr Posted:03, 2025

+1 more

**Urgent Food Delivery...** ₹250 Budget

Need quick and reliable delivery o...

Pune, Ma... Due: Apr ...

Quick Delivery

Apr Posted:02, 2025

**Create Content f...** ₹53950 Budget

Need engaging content for a...

Remote Due: Apr 1...

Copywriting

Social Media

Apr Posted:02, 2025

**Develop a Mobile...** ₹166000 Budget

Need a cross-platform...

Remote Due: May ...

React Native

Apr Posted:02, 2025

### Tasks You're Working On

Refresh

Post a New Task

Posted Working On

Completed

**Home Deep Cleaning...** ₹1200 Budget

Need a thorough cleaning of my...

Mumbai, ... Due: Apr 1...

Cleaning Apr Posted:04, 2025

Home Maintenance

### Food Delivery App UX Review

Edit

Delete

Posted by Om Chandrakant Deo on April 4th, 2025 • Open

Budget ₹15000

Due Date April 15th, 2025 (3 days left)

Location Remote

#### Task Management

Your task is open for applications. You'll be notified when someone applies.

#### Description

Looking for a UX designer to review our food delivery app prototype and provide detailed feedback on user flow, accessibility, and overall experience.

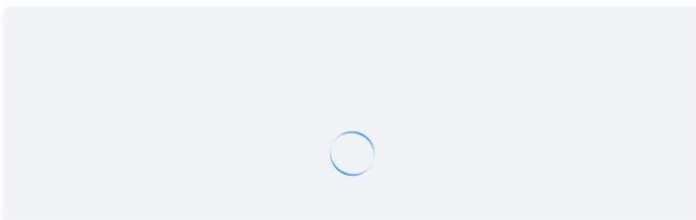
#### Required Skills

- UX Design
- App Design
- Usability Testing
- UI/UX

#### Category

- Design

#### Task Location



## Chapter 6

### Conclusion and Future Scope

#### 6.1 Conclusion

In conclusion, the **Lavork platform** successfully delivers a location-based task marketplace that connects individuals needing help with nearby service providers in a secure, efficient, and user-friendly environment.

Developed using the **MERN stack**, Lavork implements secure authentication, role-based dashboards, interactive task posting, and map-based discovery, all enhanced through modern frontend design practices. The platform promotes community-driven engagement by allowing users to post tasks, apply for them, complete assignments, and leave mutual reviews — fostering trust and accountability.

Lavork provides a scalable, modular, and responsive foundation for task outsourcing that addresses real-world challenges such as unavailability of local help, lack of gig opportunities, and inefficient task management. It effectively bridges the gap between demand and supply in the growing gig economy, with the potential for large-scale impact in both urban and rural settings.

#### 6.2 Future Scope

To ensure Lavork remains future-ready and highly competitive, several enhancements can be implemented in upcoming development phases:

- **Mobile Application (iOS/Android)**  
Develop a native or hybrid mobile app using **React Native** for wider accessibility and on-the-go usability.
- **Real-Time Chat & Messaging**  
Integrate a messaging system between task posters and workers for smoother coordination and updates.
- **Push Notifications & Reminders**  
Alert users about new tasks, application status, and task deadlines through email and push notifications.
- **Payment Gateway Integration**  
Enable secure in-app payments and budgeting using platforms like Razorpay, Stripe, or UPI systems.
- **AI-Based Task Matching**  
Implement machine learning models to auto-match tasks with the most suitable workers based on location, ratings, and past behavior.
- **Multi-Language Support**  
Add regional language support to enhance usability for a diverse user base across India and beyond.
- **Geofencing & Location Alerts**  
Alert workers when they enter an area with available tasks nearby using geofencing techniques.
- **Advanced Security & Data Encryption**  
Enhance platform security using advanced token systems and encrypted databases.  
By introducing these enhancements, Lavork has the potential to evolve into a national or global standard for community-based, hyperlocal gig work — supporting the digital workforce and enabling efficient service access like never before.

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