Gesture Lead generation system for venders and shop kippers with the help of web scraping

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Abstract: Lead generation has become an essential strategy for acquiring potential clients and driving business growth through the Internet. This paper explores the fundamental concept of lead generation, including the types of customer acquisition and methods for effectively implementing lead generation practices. The study discusses the use of billing systems, the significance of traffic sources, and the critical steps in the lead generation process. Specific industries such as e-commerce, tourism, finance, and healthcare that benefit from lead generation are highlighted, along with insights into tracking advertising costs and analysing conversion rates. The paper also addresses the growing role of lead generation in Georgia, emphasizing the transparency of the market and the importance of quality leads. Finally, it examines the factors affecting the cost of website promotion by actions and the benefits and challenges of performance based billing models for online marketing.

Keywords ***Lead Generation, MERN Stack, Service Providers, Inquiry Management, Customer Feedback, Real-Time Tracking, Subscription-Based Model, Automated Inquiry Processing, Data Security, Business Optimization, Customer Engagement, Scalable Business Solutions, Digital Inquiry Tracking.***

I. INTRODUCTION

In today's competitive business landscape, service-based enterprises face challenges in efficiently managing customer inquiries and converting potential leads into successful business transactions. Traditional inquiry-handling methods, such as phone calls, emails, and social media messages, often result in scattered communication, mismanaged leads, and delayed responses. The lack of a structured lead management process leads to inefficiencies in handling customer interactions, affecting both service providers and customers.

II. PROBLEM STATEMENT

1. Unstructured Inquiry Handling:
   - Many businesses rely on email-based inquiry collection or phone calls, which lack tracking mechanisms.
   - The lack of automated lead distribution results in delays in service provider responses.
2. Difficulty in Finding Reliable Service Providers:
   - Customers face challenges in identifying trusted service providers, as there is no centralized platform for comparing ratings, pricing, and past reviews.
   - Businesses struggle to differentiate themselves in a competitive market without proper visibility.
3. Lack of Automation & Real-Time Tracking:
   - Businesses that rely on manual inquiry tracking face delays in response times and lead processing.

     Without automated notifications, service providers may miss high-value leads, reducing business growth potential

III. PROPOSE SYSTEM

The Handyman Lead Generation System
This paper introduces Handyman, a centralized digital platform that connects users with service providers, eliminating inefficiencies by providing automated lead tracking, real-time notifications, and structured inquiry management.
Users can:
1. Submit service inquiries, which are instantly processed and categorized.

2. Browse service provider profiles, including ratings and service history.
3. Subscribe to service plans for enhanced access to premium leads.

IV. ARCHITECTURE

Fig 4.1 app user Interface

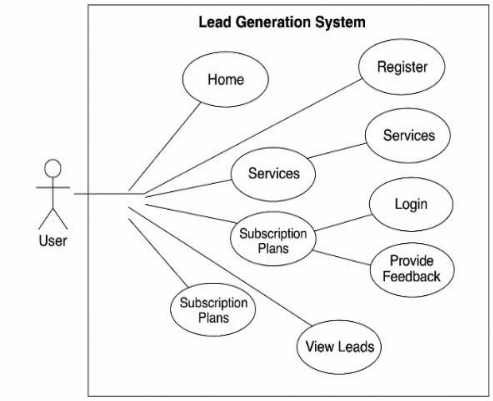
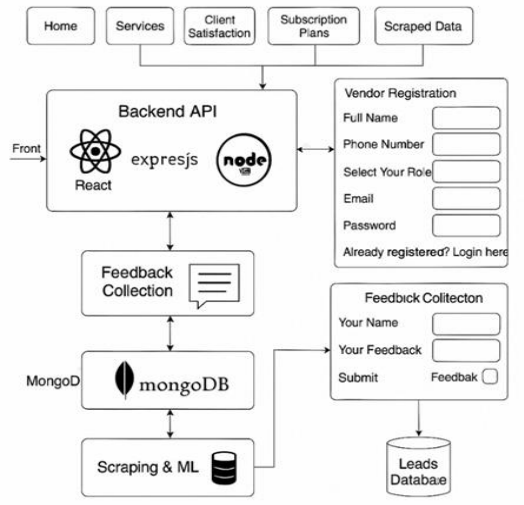


Fig. 4. 2 Overall Architecture



V. METHODOLOGY

1. Agile Development: An iterative and flexible development approach that promotes collaboration, adaptability, and continuous improvement.
2.User-Centric Design: Focuses on user needs and feedback to create intuitive and practical solutions.
3.Modular Architecture: Breaks the system into independent modules, allowing easier updates, scalability, and maintenance.
Continuous Integration and Testing: Regularly integrates code and runs automated tests to ensure stability and rapid issue resolution. Security-First Approach: Embeds security practices throughout development to protect data and ensure system integrity.

VI. RESULT

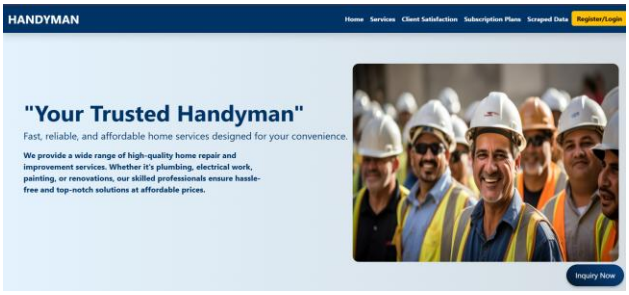


Fig 6.1 user interface

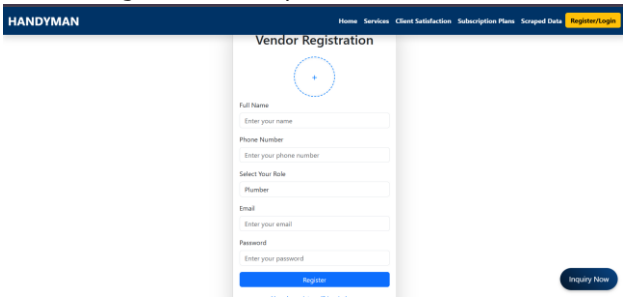


Fig 6.2 vendor registration

Fig 6.3 services

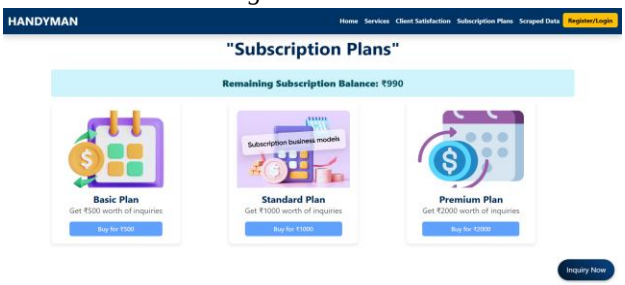


Fig 6.4 subsciption plans

Fig. 6.5 results

Result Explanation

Based on the experimental setup, the expected results of the system include:

1. Reduced Response Time: Service providers should receive inquiries within 2-3 seconds of submission.
2. Higher Inquiry Conversion Rate: At least 60% of inquiries should result in a successful service connection.
3. Efficient Subscription Model: Paid subscribers should gain higher lead access and faster response times.
4. Scalability: The system should support at least 500 concurrent users without performance degradation.
5. User Satisfaction: A positive feedback rating of 85% or higher is expected based on user experience surveys.

To validate the effectiveness of the Handyman Lead Generation System, several experiments were conducted to measure system performance, efficiency, and user satisfaction.

1. Dataset Used: The system was tested with a dataset containing 1,000 user inquiries, 500 service providers, and 1,500 responses to simulate real-world lead generation.
2. Performance Metrics: The following metrics were used for evaluation:
   a. Response Time: The time taken for service providers to receive and respond to inquiries.
   b. Inquiry Conversion Rate: The percentage of inquiries that resulted in a completed service.
   c. User Engagement: The number of users actively submitting inquiries and browsing service providers.
   d. System Load Handling: The ability of the platform to process concurrent user requests.
3. Testing Environment: The system was deployed on Vercel (Frontend) and Render/Heroku (Backend) with MongoDB Atlas for database management.
4. Security Testing: Authentication and data protection were evaluated using JWT-based security measures and encrypted API calls.

VII. CONCLUSION

This paper presented the Handyman Lead Generation System, a MERN Stack-based platform designed to optimize user-service provider interactions. The system successfully addresses issues related to manual inquiry tracking, inefficient service connections, and lack of structured feedback mechanisms. By automating lead management, response tracking, and subscription-based access, the platform provides an efficient solution for service providers and customers alike.

The experimental results indicate a significant improvement in response times, inquiry conversion rates, and user satisfaction. With further enhancements such as AI-driven matching, chatbot support, and mobile application development, the system has the potential to become a leading solution for automated lead generation and customer relationship management.

VIII. ACKNOWLEDGEMENT

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