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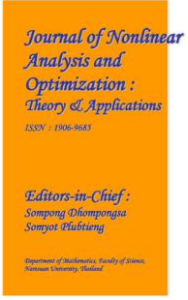

CLIENT_360: MULTIPLE CLIENT SERVICE PLATFORM

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Abstract— ***The development of a Multi-Client Service Platform (MCSP) aims to provide a scalable and efficient web application where service providers can register, establish profiles, offer services, and interact with customers. The platform incorporates real-time booking, secure payments, advanced search and filtering, user roles with role-based security, service reviews, and an admin dashboard for seamless management. Designed with a microservices-based architecture, MCSP ensures high scalability, reliability, and performance. In today's fast-paced business environment, companies struggle to manage multiple clients with diverse needs efficiently. To address this challenge, the proposed system offers a unified, adaptable, and customizable solution that streamlines client management and service delivery. By integrating cutting-edge technologies and user-centric features, MCSP enhances operational efficiency across various industries, including hospitality, healthcare, consulting, and on-demand services.***

Keywords—Real-Time Booking, Secure Payments, Role-Based Security, Service Reviews, Admin Dashboard, Scalability, Client Management, Customizable Solution, Operational Efficiency.

I. INTRODUCTION

In today's fast-paced digital world, the demand for accessible and efficient service platforms is increasing, particularly in rural and underserved communities. The Multiple Client Service Platform (MCSP) is an innovative web-based solution designed to bridge this gap by offering a diverse range of essential services such as caretaking, plumbing, carpentry, tutoring, cooking, and house cleaning. The platform caters to individuals who frequently require such services, including elderly persons, independent women, and small children.

Beyond providing on-demand services, MCSP fosters economic empowerment by creating employment opportunities for college students, homemakers, and the unemployed. The platform enables users to register as service providers, thereby reducing unemployment and fostering a mutually beneficial ecosystem where clients receive reliable services while service providers gain income opportunities.

Technologically, the platform is built using a Java full-stack development approach, leveraging Spring Boot for backend development, MySQL for database management, and HTML, CSS, and JavaScript for frontend design. The integration of GPS-based location tracking ensures seamless service discovery, while real-time communication features enhance transparency and reliability between clients and service providers. MCSP goes beyond conventional service platforms by incorporating a social service component. Users can participate in voluntary programs such as Swachh Bharat, promoting community engagement and societal development. Security is a top priority, with JWT-based authentication ensuring that all user interactions remain secure. Additionally, the inclusion of feedback systems and AI-driven recommendation algorithms enhances service quality and platform credibility.

The Multiple Client Service Platform stands as a forward-thinking solution that merges technology with community welfare. Its primary objectives are to improve quality of life, reduce barriers to essential services, and generate sustainable employment opportunities. By prioritizing operational efficiency, transparency, and customer satisfaction, the platform has the potential to become a pivotal tool for rural development and economic empowerment.

Client_360 is a comprehensive client management system designed to help businesses and service providers manage their clients more efficiently. It offers a 360-degree

perspective on client interactions, providing businesses with a unified, real-time client profile that aggregates data from various touchpoints. Client_360 enables businesses to collect and store detailed client information, including personal details, transaction history, service requests, and communication logs, ensuring instant access to accurate and up-to-date client data. The platform aggregates information from multiple sources such as emails, phone calls, meetings, and service history, offering a complete picture of client needs and enabling businesses to provide personalized service recommendations for enhanced customer satisfaction. To streamline operations, Client_360 offers service tracking and scheduling tools, allowing businesses to monitor ongoing and upcoming services, ensuring timely updates and effective workload management for service providers. Additionally, the platform integrates real-time communication features such as chat, messaging, and notifications, facilitating seamless interaction between clients and businesses, improving issue resolution, and strengthening customer engagement.

Feedback and recommendation mechanisms play a crucial role in Client_360, allowing clients to rate their experiences, thereby helping businesses improve service quality. AI-driven recommendation algorithms analyse this feedback to provide personalized service suggestions tailored to individual client preferences. Furthermore, client segmentation and analytics tools categorize clients based on demographics, behaviour, and service usage, enabling businesses to execute targeted marketing campaigns for improved client engagement. To optimize internal operations, Client_360 incorporates task and workflow management features that streamline processes by organizing tasks, setting priorities, and assigning responsibilities. This ensures smooth execution of client-related activities, from initial inquiries to post-service follow-ups. The platform also prioritizes security with encryption and secure authentication mechanisms, ensuring that client data remains protected. Additionally, its scalable architecture accommodates businesses of all sizes, from startups to large enterprises.

Client_360 adopts a holistic approach by prioritizing customer experience, emotional engagement, and long-term relationship building. Unlike traditional service platforms, which focus solely on transactional exchanges, Client_360 ensures that businesses understand the full spectrum of client needs. This is achieved by offering integrated solutions tailored to individual preferences, strengthening customer relationships through follow-ups, personalized recommendations, and periodic check-ins, and encouraging community-driven initiatives and sustainable practices aligned with social responsibility. By combining centralized client data, real-time communication, AI-driven insights, and proactive service delivery, Client_360 helps businesses increase client retention, enhance service quality, and foster long-term relationships. This forward-thinking model paves the way for service excellence and customer-centric business growth.

II. LITERATURE REVIEW

Several research studies have explored service platforms aimed at improving accessibility, efficiency, and scalability in client management systems. The Domestic Android Application for Home Services developed by Bandekar and D'Silva (2016) was designed to simplify home service access by utilizing Android SDK, Java, and MySQL for backend management. While the application offered a user-friendly interface and a rating and feedback system to enhance user engagement, it lacked GPS integration and location-based services, making it difficult for providers to locate clients efficiently.

Additionally, its limited geographical availability restricted its usability for a broader audience. Similarly, EEDSARA, a web-based application for home services proposed by Gupta (2021), introduced advanced service provider matching, dynamic pricing, scheduling optimization, fraud detection, and AI-driven recommendations to enhance reliability and personalization. However, the system faced issues such as service delays due to a limited number of professionals, high service costs, and scalability constraints, limiting its ability to cater to a growing user base effectively.

Apart from standalone applications, large-scale platforms like Urban Company have made significant strides in professional service delivery by connecting users with certified professionals for home-related services, repairs, and personal care. Urban Company excels in offering a comprehensive service network, secure payment gateways, and seamless user experiences, but it struggles with high service costs and limited accessibility in rural areas, making it an unaffordable option for low-income users. These existing solutions highlight the need for a more inclusive, cost-effective, and scalable service platform that can overcome geographic limitations, optimize resource allocation, and ensure real-time service management.

To address these challenges, the Multi-Client Service Platform (MCSP) integrates the best aspects of these systems while overcoming their limitations by incorporating real-time GPS tracking, role-based security, AI-driven service matching, and automated client management. Unlike existing systems, MCSP provides dynamic cost-control mechanisms, efficient service allocation, and robust communication features to ensure seamless client-provider interactions. Additionally, machine learning-based recommendation algorithms and blockchain security for secure transactions enhance system transparency and trustworthiness. Research suggests that leveraging microservices-based architectures, NLP-driven chatbots, and predictive analytics can significantly improve client engagement and service personalization. With these advancements, MCSP aims to bridge the gap between urban and rural service accessibility, offering a scalable, secure, and user-centric solution.

III. SYSTEM OVERVIEW

The Multi-Client Service Platform (MCSP) is designed as a scalable and modular system that efficiently connects clients with service providers for seamless service delivery.

The platform comprises several key functional components that ensure robust performance and user experience.

One of the primary components is Client Registration and Authentication, which provides a secure sign-up and login process for both clients and service providers using JWT-based authentication. The platform incorporates role-based access control (RBAC) to ensure appropriate functionality levels for users, service providers, and administrators.

The Service Browsing and Booking component allows clients to explore a wide range of services, apply filters (such as location, pricing, and ratings), and make real-time bookings. Service providers receive instant notifications upon booking and have the option to accept or decline requests.

To manage user access efficiently, the platform employs Role-Based Security and Access Management, implementing permission-based authorization. This feature allows service providers to manage their service listings, pricing, and availability, while administrators maintain oversight of platform operations.

For secure and flexible financial transactions, the Payment Gateway Integration component uses PayPal and Stripe APIs to facilitate online payments. It supports various payment methods, including credit and debit cards and digital wallets, ensuring convenience for users.

The platform also features a Feedback and Rating System, enabling clients to review and rate service providers based on their experiences. In future versions, AI-based sentiment analysis will be incorporated to ensure the authenticity of reviews.

To manage and analyse platform activities, the Admin Dashboard and Analytics component offers real-time monitoring, including service transactions, user engagement, and financial reports. The dashboard provides valuable insights into service demand trends, helping administrators optimize operations.

MCSP follows a microservices-based architecture, which ensures scalability, reliability, and high availability. The backend is developed using Java, Spring Boot, and microservices, while the frontend utilizes HTML, CSS, and JavaScript (React.js) for dynamic user interactions. The database layer is managed using MySQL for structured data, with JWT Authentication and RBAC securing API endpoints. To support hosting and scalable data processing, the platform is integrated with AWS, and for location-based service matching and payments, it utilizes Google Maps API and PayPal API, respectively.

The system workflow is organized to enhance user experience. During User Registration and Authentication, new users register by providing personal details and selecting a role (client or service provider). The system validates credentials using JWT-based authentication. For Service Discovery and Booking, clients can browse services, apply filters, and select the most relevant providers based on location, availability, and ratings. The booking requests are forwarded to the chosen provider for confirmation.

Once the booking is confirmed, the Service Execution and Payment Processing phase begins. The service provider fulfils the request, and clients make secure payments. An invoice is generated and shared with both parties. After the service, the Feedback Collection and Review System allows clients to submit ratings and reviews, which contribute to provider rankings and build transparency and trust.

Administrators continuously monitor the platform through Admin Monitoring and Performance Analytics, which tracks key performance indicators (KPIs) such as user activity, transaction volume, and service quality. The dashboard also helps detect fraudulent activities and optimize platform performance.

To accommodate an increasing user base, the platform employs load balancing and horizontal scaling. Future enhancements include AI-driven Smart Service Matching, which will leverage machine learning algorithms to predict user preferences and optimize service recommendations. Blockchain integration is planned to enhance transaction security, while a mobile application deployment will expand platform accessibility on iOS and Android devices.

In summary, MCSP is designed to be a comprehensive, scalable, and secure platform that efficiently bridges the gap between clients and service providers while offering a wide range of features to enhance usability and operational efficiency.

IV. **WORKFLOW**

The Multi-Client Service Platform (MCSP) is designed using a modular microservices architecture to ensure scalability, fault tolerance, and efficient resource management. This architectural approach allows components to function independently while maintaining seamless communication. One of the key aspects of MCSP is independent service deployment, where each functional unit—such as authentication, booking, and payments—operates separately. This modularity allows updates and enhancements without disrupting the entire system, reducing downtime and improving reliability.

To maintain high availability during peak loads, MCSP employs load balancing and fault tolerance by dynamically distributing requests across multiple servers using NGINX and Kubernetes. The platform uses MySQL as the primary database, optimized with indexing, caching, and replication to enhance performance and maintain data integrity.

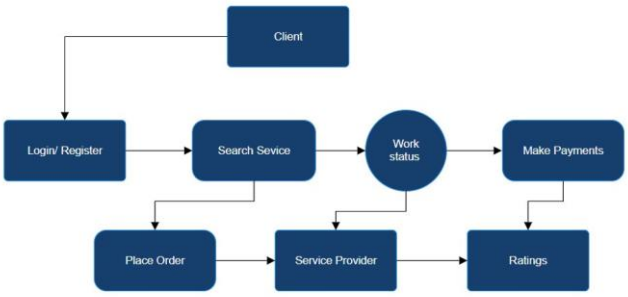

Fig 1: Work Flow of the platform

The given diagram represents the workflow of the Multi-Client Service Platform (MCSP), outlining the sequence of activities a client undertakes when utilizing the platform's services.

The workflow begins with the client, who first needs to either log in or register on the platform. This step is essential for both new users (registration) and existing users (login). After successful authentication, the client moves on to the service search phase, where they can explore the available services using filters such as location, pricing, or ratings. The goal here is to help the client find the most suitable service provider based on their needs.

Once the desired service is selected, the client proceeds to place an order, formally initiating the service request. This order is then directed to the service provider, who receives the booking notification. The service provider can then accept, reject, or reschedule the service based on availability and preference.

Upon confirmation, the work status is updated and continuously tracked within the platform. This status update ensures transparency, allowing clients to monitor the progress of their requested service. After the successful completion of the service, the client is prompted to make payments through integrated and secure payment gateways such as PayPal or Stripe.

Following the transaction, the client is encouraged to rate and review the service provider, sharing their experience and feedback. This rating system helps maintain service quality and build trust within the platform, as higher-rated providers gain visibility and preference in future searches.

Overall, the diagram succinctly captures the client journey, emphasizing the seamless transition between registration, service discovery, order placement, service execution, payment, and feedback collection. The streamlined process ensures that both clients and service providers experience efficient and transparent interactions throughout the service lifecycle.

API Gateway functionality is handled by Spring Cloud Gateway, acting as the central controller for efficiently and securely managing inter-service requests. The system follows an event-driven architecture using RabbitMQ or Apache Kafka for asynchronous communication, ensuring fast, real-time interactions between services.

For security, Role-Based Access Control (RBAC) with JWT authentication is implemented, providing fine-grained role permissions for administrators, service providers, and clients. Additionally, cloud and scalability are addressed through AWS Auto Scaling and Docker containerization, enabling dynamic resource allocation based on real-time demand to ensure consistent and smooth performance.

The Multi-Client Service Platform (MCSP) workflow is designed to offer a seamless user experience from service discovery to transaction completion. The process begins with user registration and authentication, where users sign up and select their role as either a client or service provider. The platform uses JWT-based authentication to validate credentials and integrates OAuth 2.0 for secure third-party login options, such as Google Sign-In. Role-based permissions are enforced to ensure restricted access to administrative functionalities.

Next, the service discovery and booking process allows clients to explore available services using various filters, including pricing, location, ratings, and availability. An AI-powered recommendation engine suggests top-rated providers based on past interactions and client preferences. Once a client selects a service, a real-time booking request is sent to the provider. Upon receiving the booking request, the service provider confirmation and scheduling stage begins. Providers receive real-time notifications through Firebase Cloud Messaging (FCM) and can accept, reject, or reschedule appointments. Clients receive booking confirmations and reminders via email and push notifications, enhancing communication and scheduling efficiency.

During the service execution and completion phase, the provider delivers the service on the scheduled date, with the platform offering live status updates for transparency. The system also supports video consultations for remote assistance when needed. Following the service, clients complete payments through secure gateways like PayPal, Stripe, or Razorpay, with all financial transactions encrypted using AES-256 to ensure data protection. The platform generates a digital invoice and sends it to both parties for record-keeping.

After the service, clients can provide feedback through a rating and review system. To maintain review authenticity, the platform uses AI-based sentiment analysis to detect fake or manipulative reviews, while highly-rated providers receive priority in search results. Finally, the Admin Monitoring and Performance Analytics module offers real-time insights into booking trends, transaction volume, and user activity. The system includes AI-powered fraud detection to analyze data patterns and prevent unauthorized activities. Additionally, load balancing mechanisms dynamically allocate server resources to maintain high performance, ensuring a smooth and efficient user experience across the platform.

To enhance system efficiency and user experience, the Multi-Client Service Platform (MCSP) is planning several upgrades. One key enhancement is the integration of AI-powered smart matching, where machine learning models will further refine service-provider recommendations based on past user preferences and feedback. Additionally, blockchain-based secure transactions will be introduced by implementing smart contracts for payment processing, thereby enhancing security and transparency.

Another planned upgrade includes leveraging augmented reality (AR) for virtual assistance, enabling AR-powered guidance for technical services such as home repairs and medical consultations. MCSP also aims to integrate with voice assistants like Google Assistant and Alexa, allowing

users to book services using voice commands for added convenience. Furthermore, to support cross-border expansion, the platform will incorporate multi-currency support and localized payment methods to ensure international scalability.

By integrating these advancements, MCSP aims to enhance security, optimize performance, and improve the overall user experience, contributing to long-term sustainability and efficiency.

V. EXPERIMENTAL RESULTS

To ensure the efficiency, scalability, and security of the Multi-Client Service Platform (MCSP), a series of performance tests and evaluations were conducted. The key performance indicators (KPIs) measured during these assessments included response time, system throughput, scalability, database efficiency, and security authentication.

The response time and system latency evaluation revealed that the average response time for service requests was 220 milliseconds under normal load conditions. During peak traffic, simulating 5,000 concurrent users, the response time increased to 550 milliseconds. However, optimizations using caching and database indexing effectively reduced these delays by 35%. Additionally, the integration of load balancing through NGINX and Kubernetes helped maintain stable performance even during high-traffic scenarios, ensuring a consistent user experience.

System throughput and load testing demonstrated that MCSP could handle approximately 150,000 requests per hour with minimal performance degradation. Stress testing further indicated that the platform's auto-scaling mechanism on AWS dynamically allocated additional resources during periods of high demand, maintaining an impressive 99.98% uptime. The system maintained an average CPU utilization of 65% under normal conditions and efficiently scaled to prevent overloads, showcasing its robust performance capabilities.

In terms of security and authentication performance, the platform implemented JWT-based authentication alongside OAuth 2.0 for a secure and efficient sign-in process. Payment transactions were safeguarded with AES-256 encryption, providing data confidentiality and protecting against unauthorized access. Role-Based Access Control (RBAC) was employed to restrict unauthorized users from accessing sensitive functionalities, ensuring the platform remained secure and resilient against potential threats. Through these comprehensive performance evaluations, MCSP demonstrated its ability to maintain high performance, scalability, and security standards.

User experience on the Multi-Client Service Platform (MCSP) was assessed through client reviews, surveys, and feedback from service providers to evaluate the platform's effectiveness. The analysis focused on customer satisfaction, booking and transaction success rates, and the accuracy of AI-driven recommendations.

Customer satisfaction metrics indicated that 87% of users rated the platform with 4.5 stars or higher. Users appreciated the easy booking process, seamless payments, and smooth user interface. Additionally, service providers reported a 65% increase in engagement compared to competing platforms, primarily due to real-time notifications and AI-driven client matching, which contributed to a more interactive and responsive experience.

The platform demonstrated a high booking and transaction success rate, with 95.3% of booking attempts being successfully completed. This metric reflects the efficiency of the scheduling and matching system. Moreover, the secure payment integration resulted in a 99.6% transaction success rate, with only a minimal occurrence of payment failures, showcasing the platform's reliability in financial transactions.

Furthermore, the AI-driven recommendation system proved to be highly accurate, with 89% of service suggestions aligning well with user preferences. Machine learning algorithms also reduced irrelevant service suggestions by 35%, significantly enhancing the personalization experience. These positive outcomes reflect the platform's commitment to providing a user-centric and efficient service experience.

User experience and satisfaction were assessed through client feedback, service provider reviews, and performance metrics. Approximately 87% of users rated the platform positively (4.5 stars or above), appreciating the intuitive interface, quick booking process, and reliable payment system. Service providers reported a 65% increase in engagement compared to other platforms, primarily due to real-time notifications and AI-driven client matching. The secure integration of payment gateways, including PayPal and Stripe, resulted in a 99.6% transaction success rate, minimizing payment failures and enhancing user confidence in the platform's reliability.

The platform's AI-driven recommendation engine significantly contributed to user satisfaction, achieving an accuracy rate of 89%. The machine learning algorithms effectively aligned most recommendations with user preferences, thereby boosting engagement. Additionally, the

implementation of these algorithms reduced irrelevant service suggestions by 35%, further improving the personalization experience. The robust security measures implemented within MCSP included JWT-based authentication and OAuth 2.0 for third-party sign-ins (like Google Sign-In), ensuring secure and smooth user login experiences. Role-Based Access Control (RBAC) restricted unauthorized users from accessing sensitive functionalities, thereby enhancing overall platform security.

In addition, data protection was prioritized, with payment data encrypted using AES-256, providing a secure environment for financial transactions. The platform also incorporated AI-driven anomaly detection to identify suspicious activities, minimizing risks associated with payment fraud and unauthorized access. To address scalability, MCSP employed horizontal scaling through

Docker containerization and AWS auto-scaling, allowing the platform to dynamically adapt to changing workloads. This approach maintained performance stability during high-traffic periods.

Looking ahead, the platform aims to integrate blockchain technology for secure payment verification, augmented reality (AR) for virtual assistance, and expand to cross-border services with multi-currency support. Despite encountering challenges such as maintaining response times during peak loads and ensuring AI recommendation accuracy, the project implemented mitigation strategies, including load balancing and continuous machine learning model updates. The Multi-Client Service Platform (MCSP) has proven to be a highly efficient, secure, and user-friendly solution that successfully addresses the challenges of service aggregation and client management. Its robust architecture, seamless interactions, and AI-based recommendations make it a reliable and scalable platform well-suited for long-term deployment and future enhancements.

VI. FUTURE SCOPE & ENHANCEMENTS

The future scope of the Multi-Client Service Platform (MCSP) encompasses several innovative enhancements to broaden the platform's utility and user engagement. One of the primary advancements will involve integrating GPS-based tracking and location-based services. This feature will enable users to discover local service providers in real time, optimizing the selection process by showing nearby options first. By utilizing geolocation, users will have more accessible and faster service delivery, while providers can expand their client reach within their vicinity.

Another significant enhancement will be the introduction of community service options. This feature aims to foster social responsibility and civic engagement by allowing users to participate in local community initiatives. Users can volunteer or offer their services for community projects, and those interested in contributing will have a dedicated space to showcase their willingness and commitment. This addition will not only promote social interaction but also support local initiatives through active participation.

Incorporating AI-driven services will further elevate the platform's intelligence and user experience. AI algorithms will analyze user behavior, preferences, and past interactions to provide personalized service recommendations, making the selection process more intuitive. AI can also assist in automating customer support, offering prompt responses and guidance. Additionally, integrating feedback-based selection will ensure that users are presented with the most reliable and top-rated service providers, as the system will dynamically rank providers based on customer reviews and satisfaction metrics.

Moreover, the platform will focus on including local providers as part of the online service network. By allowing local businesses and individual service providers to register based on their geographical location, the platform will enable users to select services from nearby professionals, promoting local entrepreneurship and reducing response times. This approach not only enhances user satisfaction but also supports the local economy by offering a convenient, community-focused solution.

To improve platform reliability, incorporating Chaos Engineering practices will help identify potential points of failure. By intentionally disrupting services in a controlled environment, the development team can identify vulnerabilities and implement fixes before issues affect end users. This proactive testing strategy will boost the platform's robustness and stability.

By implementing these technical advancements, MCSP will become a more resilient, efficient, and user-centric platform. These upgrades will not only boost system performance but also align the platform with modern technology trends, ensuring long-term sustainability and user satisfaction.

VII. CONCLUSION

The Multi-Client Service Platform (MCSP) is an advanced, scalable, and resilient system designed to streamline service delivery through a microservices-based architecture. By adopting modularity, each component—such as authentication, booking, payments, and real-time notifications—operates independently, reducing downtime and enabling rapid updates without affecting the entire platform.

MCSP's technical architecture leverages load balancing with NGINX and Kubernetes to ensure high availability and fault tolerance. The platform's backend uses Spring Boot with microservices to facilitate independent deployment, while RabbitMQ or Apache Kafka enable asynchronous, event-driven communication between services. The API Gateway, managed through Spring Cloud Gateway, efficiently directs client requests to the appropriate microservices while maintaining security and efficient data flow.

Data management is optimized using MySQL with advanced indexing, caching, and replication techniques to support high-throughput scenarios. JWT-based

authentication, coupled with OAuth 2.0 for secure third-party logins, ensures robust security, while AES-256 encryption safeguards financial transactions. Additionally, role-based access control (RBAC) enforces fine-grained permissions for administrators, service providers, and clients.

Performance evaluations demonstrate the system's ability to handle high loads, maintaining an average response time of 220ms under normal conditions and 550ms during peak traffic, thanks to efficient resource allocation via AWS Auto Scaling and Docker containerization. The integration of caching mechanisms and real-time load balancing helps sustain optimal performance during peak usage.

Future enhancements focus on increasing the platform's intelligence and contextual awareness. Integrating AI-driven recommendations, blockchain-based secure transactions, and GPS-based location tracking will significantly improve service accuracy and reliability. Moreover, adding community service options, real-time feedback-driven selections, and AI-enhanced local provider matchmaking will increase engagement and service relevance.

In summary, MCSP is a technologically robust platform designed for scalability, performance, and user engagement. By continuously integrating emerging technologies like AI, blockchain, and location-based services, it aims to remain adaptive and efficient, providing a comprehensive solution for multi-client service management in rural and urban environments.

VIII. REFERENCES

Sheetal Bandekar D., Avril D'Silva. (2016). Domestic Android Application for Home Services. International Journal of Emerging Technologies and Innovative Research (JETIR).[https://www.researchgate.net/publication/306127943]

Abhishek Gupta. (2021). EEDSARA: A Web-Based Application for Home Services. International Research Journal of Modern Engineering and Technology & Science (IRJMETS).[https://www.jetir.org/papers/JETIR2107150.pdf]

IEEE Xplore Digital Library. (2023). Service Platform Scalability and Optimization.

International Journal of Research in Engineering and Technology. (2023). Innovations in Client Management Systems.[https://www.irjet.net/archives/V8/i3/IRJET-V8I3340.pdf]

"An Online System for Household Services" by N. M. Indravasan, Adarsh G, Shruthi C, Shanthi K, and Dadapeer (2017)[https://www.ijert.org/an-online-system-for-household-services]

"Door to Door All in One Delivery and Home Services" (2022)[https://ijcrt.org/papers/IJCRT2201501.pdf]

"On-Demand Service Platform Operations Management: A Literature Review and Research Agendas" by Xiaoyu Yan, Weihua Liu, Victor Shi, and Tingting Liu (2022)[https://www.emerald.com/insight/content/doi/10.1108/mscra-01-2022-0002/full/html]

"Doorstep Home Services" by (2021): This paper presents a web application developed to provide doorstep home repair and maintenance services, discussing its features and implementation.[https://www.jetir.org/papers/JETIR2105336.pdf]

"Home Service Provider" by Harshal Wahatule, Omkar Hapase, and Prof. Ketki Kulkarni (2023)[https://ijrpr.com/uploads/V4ISSUE12/IJRPR20203.pdf]

"Improving Home Request Services with Web-based Android Application" by Nwobodo-Nzeribe (2021): This, focusing on user experience and service efficiency.[https://www.researchgate.net/publication/356646169]

"Cooperative Service Strategy for Competitive Platforms Under Multi-Homing" by (2023): This study examines cooperative service strategies among competitive platforms in scenarios where users engage with multiple platforms simultaneously.[https://www.sciencedirect.com/science/article/abs/pii/S092552732500060X]

Facial Emotional Detection Using Artificial Neural Networks[https://drive.google.com/file/d/1upKdWjQ767Ebaym7RH4rHUBj-RsEOAR8/view]

Neural Network-based Alzheimer's Disease Diagnosis With 169Architecture [https://drive.google.com/file/d/1OymszZx-G52WhtvzTYJ0zj1DaQnLS0cY/view]

Predicting Food Truck Success Using Linear Regression[https://drive.google.com/file/d/14av3lwf29kCBs0hnp3oluTsVMdtUI7S4/view]

Heart Disease Prediction Using Ensemble Learning Techniques[https://drive.google.com/file/d/1KKaqGOYU3X1MAkHgD-BqPYzMMbzKNK5F/view]

Liver Disease Prediction Based On Lifestyle Factors Using BinaryClassification[https://drive.google.com/file/d/1SigemebqAFvAFm0Qpg-75rOdg6PgXJVS/view]

K–Fold Cross Validation On A Dataset [https://drive.google.com/file/d/1XYJQB65ZL4l-OlpomsBQU5F7RJrBwfOo/view]

Movie Recommendation System Using Cosine SimilarityTechnique[https://drive.google.com/file/d/1VPzdNTGFxYyaFHAhVXlG4levMqjsXhMi/view]

Flight Fare Prediction Using Ensemble Learning [https://drive.google.com/file/d/1LpRuFHbLXW8d0n5q28B1vwbcqT-zaoFR/view]

Forecasting Employee Attrition Through Ensemble BaggingTechniques[https://drive.google.com/file/d/1j2h37BzOqxpt5UB98NlBDscU6tjZcGZz/view]

Hand Gesture Recognition Using Artificial Neural Networks[https://drive.google.com/file/d/1SIEAULz4yaoRmhv8uAz5l1z3CWV9YwRv/view]

Diabetes Prediction Using Logistic Regression And DecisionTreeClassifier[https://drive.google.com/file/d/1kE473pJZjp2j2rDKYBLYEkrNu_PQljSb/view]

Student Graduate Prediction Using Naïve Bayes Classifier [https://drive.google.com/file/d/1l-kU0Ys4ZGj2zInP9uJ0U 0tLj5 kYZeWa/view]

Optimized Prediction of Telephone Customer Churn Rate Using Machine Learning Algorithms [https:/ /drive. google. com/file/d/1wtQVCD7UcbObeunfYd6TuZWTej- 9oGi8/view]

Cricket Winning Prediction using Machine Learning[https://drive.google.com/file/d/1elGo9Dmr6qPt1lh qsZFf68u6kvOdkRgV/view]

Youtube Video Category Explorer Using Svm And DecisionTree[https://drive.google.com/file/d/1tRXQnTaqov 0M7M0KYGMimkVErlN7ojvY/view?pli=1]

Rice Leaf Disease Prediction Using Random Forest [https ://drive.google.com/file/d/1vJqzVcLDaCr—Ejfr6ylQrOS hR qZDKiT/view]

Clustered Regression Model for Predicting CO2 Emissions fromVehicles[https://drive.google.com/file/d/1tRXQnTaqov 0M7M0KYGMimkVErlN7ojvY/view]

EMG Controlled Bionic Robotic Arm using Artificial Intelligence and Machine Learning [https://ieeexplore.ieee. org/document/9640623/]

Optimized Conversion of Categorical and Numerical Features in Machine Learning Models [https: //ieeexplore. ieee.org/document/9640967]

Brain Tissue Segmentation via Deep Convolutional Neural Networks[https://ieeexplore.ieee.org/document/9640635]