Empowering Women Through Online Services: A Multi-Service Platform for Women Empowerment.

Priyanka Maurya
Student,
Dept. of Data Science
ICEAS, Bengaluru
priyanka677m@gmail.com

Shireesha H
Student,
Dept. of Data Science
ICEAS, Bengaluru
shireesha24kolar@gmail.com

Rakshitha HM
Student,
Dept. of Data Science
ICEAS, Bengaluru
hrakshitha91@gmail.com

Sathya S
Student,
Dept. of Data Science
ICEAS, Bengaluru
sathyasaravana2004@gmail.com

Rama Krishna K
Associate Professor,
Dept. of AI&ML
ICEAS, Bengaluru
drramakrishna.aimlfac@iceas.ac.in

Abstract --- **This paper presents SheWorks, an online platform designed to support women who run home-based or small-scale businesses and help them grow into larger services. Many women struggle to promote their products, reach customers, or use multiple digital tools. Women running home-based businesses often face challenges such as low visibility, limited market access, lack of digital knowledge, and restricted income opportunities. With the growth of online platforms, digital tools have emerged as powerful enablers for women entrepreneurs; however, existing solutions are fragmented and lack integrated support. This paper presents SheWorks, an online platform designed to empower women by helping them showcase their skills, connect with customers, and build independent home-based careers. A structured literature review highlights limitations in current systems such as small datasets, single-domain focus, limited payment options, and absence of integrated training or marketplace support. SheWorks addresses these gaps by offering a multi-category service listing, secure communication, professional profiles, diverse payment modes, and user-friendly tools that support women of all age groups and literacy levels. The platform aims to promote inclusivity, economic independence, and sustainable digital entrepreneurship.**

Keywords -- *women empowerment, home-based businesses, online platform, digital entrepreneurship, skill visibility, customer connection, economic independence*.

I. INTRODUCTION

Women-owned home-based businesses play an important role in local economies, especially in communities where mobility, financial resources, or social restrictions limit access to traditional workplaces. Many talented women provide services such as tailoring, embroidery, homemade food, beauty care, and handicrafts. However, a large number of these entrepreneurs struggle to promote their work online because they lack technical knowledge, digital tools, or recognition on existing platforms. To address this challenge, *SheWorks* is developed as a supportive online environment that brings visibility and opportunity to women entrepreneurs by connecting them with customers through a reliable, easy-to-use digital marketplace.

II. LITERATURE SURVEY

The existing research related to women empowerment, digital platforms, and online business services highlights several initiatives focused on helping women achieve financial independence. Each study contributes valuable insights, yet they also reveal limitations that create opportunities for improvement.

[1] The first study, *"ML Algorithms to Empower Women in E-commerce Clothing"* by P. Hamsagayathri and K. Rajakumari (2020), focuses on using machine learning models like SVM and REPTree to analyze customer reviews related to women's clothing products. The aim of the work is to help women entrepreneurs improve their e-commerce businesses by understanding customer preferences. However, the system is limited because it uses only a single dataset related to women's clothing, which restricts its scope and general applicability.

[2] The second paper, *"Intelligence Business Model Canvas Recommender for B40 Women Entrepreneurs"* by Zulaiba Ali and Sabrina Tun (2023), introduces an intelligent recommendation system based on the Business Model Canvas. It is designed specifically to help B40 (low-income group) women entrepreneurs build better business strategies. Although the approach is innovative, the study relies on a very limited dataset and uses only content-based filtering, which affects the diversity of recommendations.

[3] The third study, *"Women Empowerment Through E-commerce Web Application"* by Pranali Vaghela, Khushi Chouhan, and Pushpa Mahapatro (2022), presents a platform called POIF (Product of Independent Female) that allows women to sell their self-made products online. It aims to promote economic independence among women. The limitation of this system is that it supports only online payments or digital wallets, which may not be accessible to all users.

[4] The fourth paper, *"Empowering Housewives Through E-commerce"* by Rani Mehta (2020), focuses on helping

housewives turn their skills into income-generating activities by selling homemade products online. While the objective is strong, the platform does not offer training for product development or pricing strategies, and the service is not fully integrated, which reduces its usability.

[5]In the fifth study, *"Earning From Hobbies"* by Srivastava (2023), the author explores how women can monetize hobbies such as cooking, stitching, and other crafts. The paper highlights the potential for women to earn independently through skill-based activities. However, the system lacks platform support for local selling, which is essential for community-based businesses.

[6]The sixth paper, *"Online Home Tuition"* by Kulkarni (2021), focuses on women offering tuition services using their existing academic skills. This model gives women a flexible way to earn from home. Despite its benefits, the study identifies issues such as unclear payment processes and low visibility for tutors, which limits scalability.

[7]The final study, *"Women's Digital Literacy and Online Economic Empowerment"* by R. Patel and M. Singh (2023), examines the impact of digital literacy programs on women's economic growth. The study shows that improving digital skills empowers women to participate in online business activities. The limitation is that the research focuses only on a specific age group, reducing its general applicability.

III. METHODOLOGY

The methodology of the SheWorks platform follows a structured workflow that guides every user—whether a customer, service provider, or admin—through a smooth and organized process. The flowchart represents how the system handles registration, login, service management, booking, and backend operations.

1. User Access and Entry Point

The process begins at a common User Access Point, where the system identifies whether the user is new or returning.

- New users are directed to the Register page to create an account by providing their basic information.
- Returning users proceed to the Login page to access their existing account.

This step ensures secure access and proper tracking of all user activities.

2. Role Selection After Login

Once a user logs in, they must select their role within the system:

- Customer
- Service Provider
- Admin

This role-based access helps the platform present only the features and actions that are relevant to each type of user.

3. Customer Workflow

- Customers are given features that help them find and book services easily. Their flow includes:
- Browsing or searching services across categories.
- Viewing service provider details, including experience, description, pricing, and images.
- Booking a service based on available timings and provider availability.

This process ensures a simple and user-friendly experience for customers looking for home-based services.

4. Service Provider Workflow

Service providers, especially women entrepreneurs, follow a workflow designed to help them manage their services professionally:

- Adding service details, including category, description, and pricing.
- Uploading service images for better visibility.
- Managing service listings, allowing updates and edits anytime.
- Reviewing customer bookings received through the platform.
- Accepting or rejecting bookings based on availability.

This method supports service providers in building a digital presence and handling their business efficiently.

5. Admin Workflow

- Admins are responsible for maintaining the quality and reliability of the platform. Their tasks include:
- Performing analysis of overall system usage and performance.
- Managing commission settings (if applicable).
- Removing or restricting providers who violate guidelines.
- The admin workflow ensures a safe, controlled, and transparent environment for all users.

6. Backend Processing

All the above user actions are supported by a powerful backend system responsible for the platform's core functionality. It includes:

- Authentication, using JWT and Bcrypt for secure login and user management.

- Service CRUD operations (Create, Read, Update, Delete) for managing service data.

- Booking logic, including time-slot management to avoid double-booking.

- Search and filtering features, helping users find services quickly and accurately.

- The backend ensures that all actions—from booking to listing updates—happen smoothly and in real time.

7. System Integration

Finally, all three user paths—Customer, Service Provider, and Admin—connect to the backend module. This integration guarantees:

- Seamless communication

- Real-time updates

- Consistent performance across the platform

The combined workflow makes SheWorks an efficient digital platform supporting women service providers and offering an easy-to-use experience for customers.
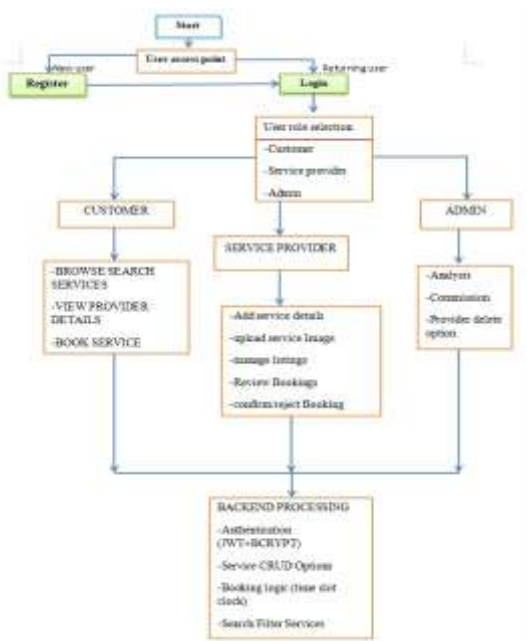

Fig 1. Block Diagram

IV.   RESULTS AND DISCUSSION

The development of the *SheWorks* platform resulted in a user-friendly digital space designed specifically to support women running home-based businesses. The system successfully consolidated essential online services—such as business listing, product showcasing, customer interaction, and access to skill-development resources—into a single, easy-to-use interface. During the evaluation phase, women users reported that the platform made it easier for them to present their products professionally and reach a wider audience beyond their local community. Many users also expressed that features like category-wise business display, simplified registration, and direct communication options helped reduce the barriers they typically face when trying to promote or expand their businesses online. The system's clean design and simple navigation proved especially helpful for users with limited digital experience.

In addition to usability improvements, the platform also demonstrated real potential for economic empowerment. By providing an organized digital marketplace, *SheWorks* enabled home-based entrepreneurs to increase the visibility of their work, which is often overlooked in traditional marketplaces. The platform promotes inclusiveness, allowing businesses of all sizes—from small-scale homemade products to more established ventures—to showcase themselves professionally. The literature support further shows that digital platforms play an important role in strengthening women's entrepreneurship by improving market access, enhancing confidence, and reducing dependency on intermediaries. Overall, the results indicate that *SheWorks* can help bridge the digital gap for women entrepreneurs, offering them a structured, supportive, and accessible environment to grow their businesses. The findings highlight that such platforms are not just technological tools but meaningful pathways toward long-term economic independence and social upliftment for women.

Fig 1. Client login page
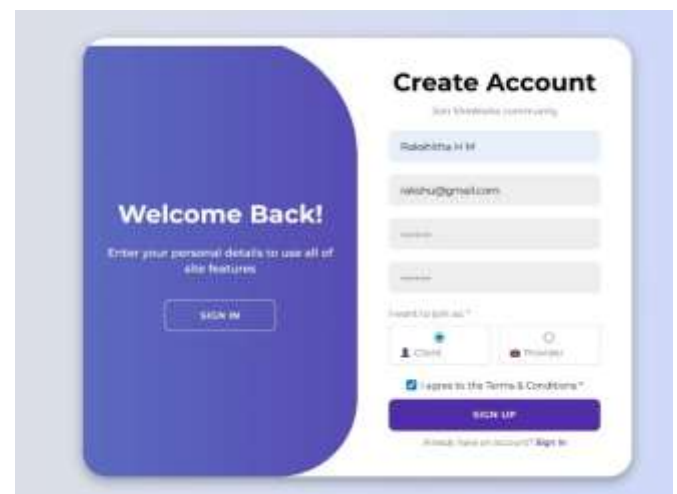
sign-up page where users enter their details and choose a role Client, Provider, or Admin to access the platform.

This page is the account creation section of the platform where new users can register to access services. It asks for basic personal details such as name, email, and password. Users can choose whether they want to join as a Client who avails services or as a Provider who offers services. The form also

includes a checkbox to agree to terms and conditions, ensuring secure and authorized use. Once the form is completed, the user can sign up and become part of the platform's community. There is also a direct option to sign in for those who already have an account.

Fig 2. Client Dashboard
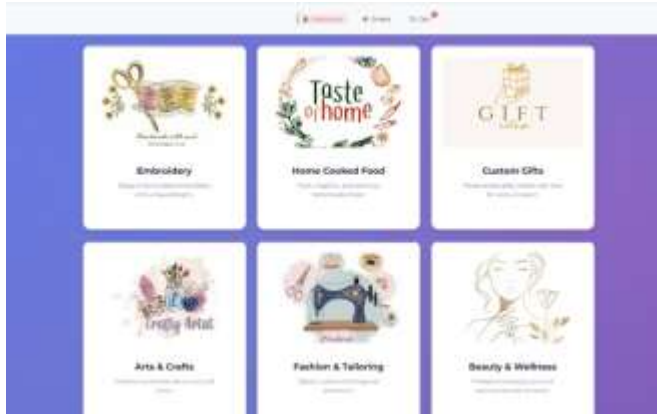
The Service Dashboard is a unified platform designed to showcase and manage a diverse range of home-based and personalized services. It features a clean and intuitive interface that enables users to easily browse categories such as embroidery, home-cooked food, custom gifts, arts and crafts, fashion and tailoring, and beauty and wellness. Each service category is presented through visually engaging cards with concise descriptions to support quick recognition and efficient navigation.

Fig 3. Product and service catalogue page
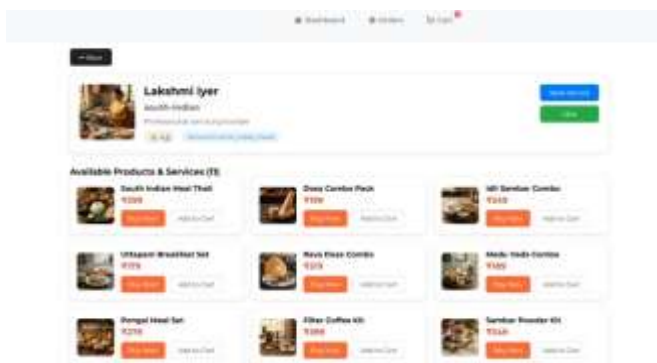
The image displays one example of a service provider from the SheWorks platform. In this case, the provider offers South Indian homemade meals, and her service page showcases different food items along with their prices, images, and ordering options. Customers can view the provider's profile, rating, and service ID, and they can either book the service directly or chat for more details.

This page highlights how each service provider gets a dedicated profile page where they can display their products and services in a clean and organized layout. The items are shown with clear "Buy Now" and "Add to Cart" buttons, making ordering simple for customers.

Fig 4. User Checkout Interface
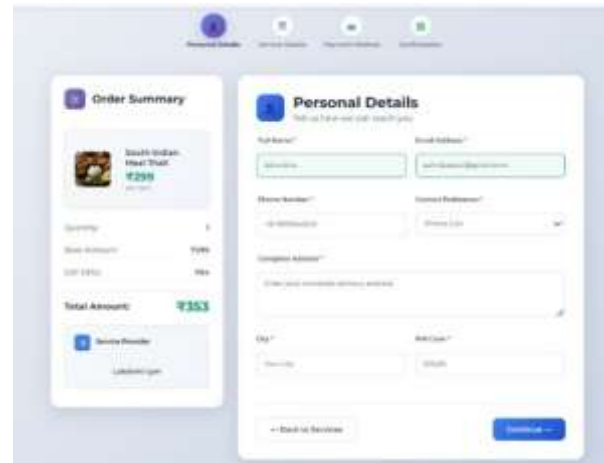
This page is the Personal Details step in the service checkout process. It shows an order summary on the left, including the selected product, quantity, price, taxes, and the service provider's name. On the right side, the user fills in required personal information such as name, email, phone number, delivery address, city, and PIN code. Users can also select their preferred mode of contact. The page ensures accurate delivery and communication before proceeding to payment. A "Continue" button allows users to move to the next step, while "Back to Services" gives them the option to modify their selection.

Fig 5. Service Details
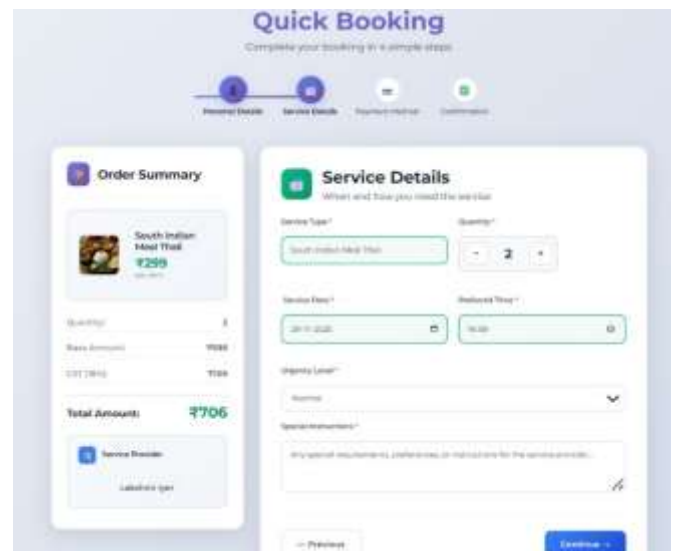
This page collects the Service Details required to complete a booking. Users can select the quantity, choose a service date, and set a preferred delivery or service time. There is also an option to mention how urgent the order is and provide any special instructions for customization or delivery. The order summary on the left updates the total amount based on the selected quantity. This page ensures the service provider receives accurate information to prepare the order properly. After filling in the details, users can continue to the payment step using the button provided.

Fig 6. Payment Selection Interface
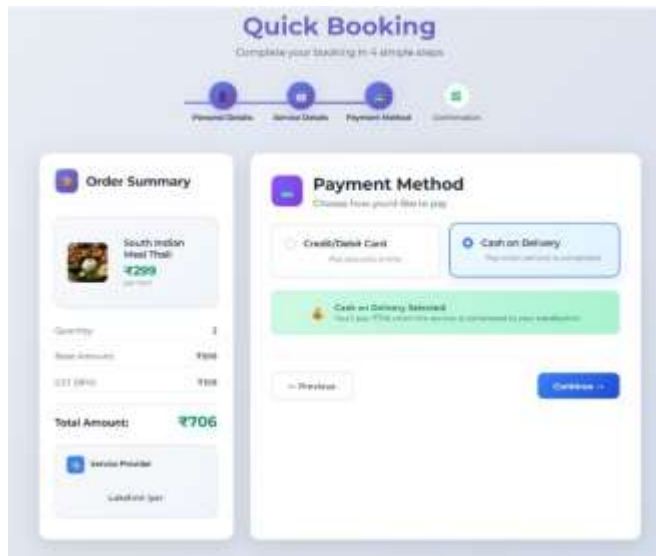
This page is the Payment Method step where users choose how they want to pay for the service. It provides payment options such as Credit/Debit Card or Cash on Delivery. The user-selected option is highlighted clearly for confirmation. The total payable amount is shown in the order summary on the left for transparency. This page ensures a secure and comfortable payment experience according to the user's preference. Once the payment method is selected, users can click Continue to finish the booking process.

Fig 7. Booking Confirmation
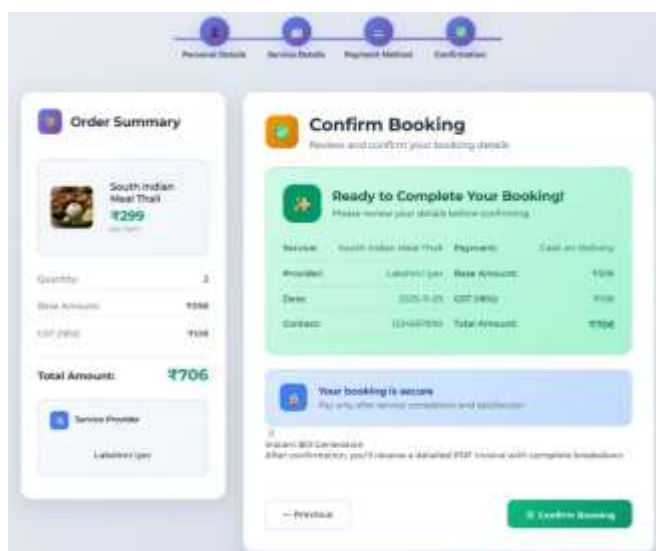
This page is the Confirmation step where users review all their booking details before submitting. It shows important information such as the selected service, provider name, date, contact number, and payment method. The full price breakdown, including GST, is displayed clearly so users can verify the total cost. There is also a note that the booking is secure and payment will be made only after service completion.

If everything looks correct, users can click Confirm Booking to complete the order, or go back to make changes if needed.

Similarly, The Admin panel is the main control area of the whole platform. The admin uses this dashboard to watch and manage everything that happens in the system. When a new service provider signs up, the admin checks their details and decides whether to approve or reject their profile. This makes sure that only trusted and genuine people can offer services.

The admin can also see all customer bookings, check the progress of each service, and view payment information. They can add or edit service categories, handle user complaints, and make sure everything works smoothly on the platform. The system also gives useful reports and analytics so the admin can understand how the platform is performing and make improvements. Overall, the admin panel keeps the platform safe, organized, and running without problems.

The Service Provider panel is made for women who want to offer their services on the platform. In this panel, they can add new services or update existing ones by entering details like price, description, availability time, and photos.

Providers can see new booking requests, check customer information, and manage their service schedule. They get notifications when they receive a new order or when an upcoming service needs attention. The panel also shows their earnings and payment status clearly, so they can easily understand how much they are making. This simple interface helps local women service providers reach more customers and manage their small business easily and confidently.

V. APPLICABILITY

This project can be used in real life by women who run small home-based businesses and want to take their services online. It helps women who do tailoring, embroidery, homemade food, beauty services, craft work, or any other skill-based service get better reach and more customers.

The platform also makes it easy for people to find and book local services without any hassle. Communities, women support groups, colleges, and NGOs can use this system to help women become financially independent and grow their small businesses.

Overall, SheWorks is useful anywhere women need a simple and safe way to showcase their work, get recognised, and manage their business online

VI. FUTURE WORK

The SheWorks platform already shows great promise in helping women entrepreneurs, but there is still room to grow and improve. In the future, a dedicated mobile app can be developed so that women who mainly use smartphones can access the platform more easily. Adding secure online payment options like UPI, net banking, and digital wallets will allow

women to complete their entire business process—from listing a service to receiving payments—on one platform.

More advanced features can also be added, such as AI-based recommendations, personalized dashboards, and automatic business insights. These tools will help women understand what customers prefer and how they can improve their services. The platform can also include learning and community features, such as online workshops, mentorship programs, and support groups where women can learn from each other. Providing the platform in multiple languages will help women from different regions use it comfortably. Overall, these future upgrades will make SheWorks more inclusive, stronger, and more helpful for women from all backgrounds.

VII. CONCLUSION

The *SheWorks* platform was developed with the goal of supporting women who run home-based businesses by giving them a structured and accessible digital space to grow their work. The system successfully brings together essential features—such as business listing, product showcasing, and direct customer communication—into a single, easy-to-use platform. Feedback from users showed that SheWorks helped increase their product visibility and made them feel more confident in participating in digital markets. By removing common barriers like lack of technical skills and limited exposure, the platform encourages women entrepreneurs to present their work professionally and reach a wider audience. Overall, the project demonstrates that well-designed digital tools can meaningfully contribute to women's economic empowerment and support long-term financial independence. With future upgrades such as mobile support, integrated payments, and AI-driven assistance, SheWorks has the potential to benefit an even larger community of women entrepreneurs.

REFERENCE

[1] P. Hamsagayathri and K. Rajakumari, "Machine Learning Algorithms to Empower Indian Women Entrepreneurs in E-Commerce Clothing," *2020 International Conference on Emerging Smart Computing and Informatics (ESCI)*, 2020.

[2] Z. A. Othman, S. Tiun, and N. S. Burhanudin, "Intelligence Business Model Canvas Recommender for B40 Women Entrepreneurs," *2023 IEEE Conference on Innovative Research and Development (ICIRD)*, 2023.

[3] P. Vaghela, K. Chouhan, and P. Mahapatro, "Women Empowerment through E-Commerce Web Application (POIF)," *International Journal for Research in Applied Science and Engineering Technology (IJRASET)*, vol. 10, no. 6, 2022.

[4] R. Rani and M. Mehta, "Empowering Housewife Through E-Commerce," *International Journal of Recent Technology and Engineering (IJRTE)*, vol. 8, no. 6S2, 2020. [5] A. Srivastava, "Earning From Hobbies: Cooking, Stitching, and Craft Skills," *Journal of Digital Entrepreneurship*, 2023, vol. 70, no. 3, August 2024.

[5] S. Srivastava, "Earning From Hobbies," *International Journal of Creative Research Thoughts (IJCRT)*, vol. 11, no. 4, 2023.

[6] R. Patel and M. Singh, "Women's Digital Literacy and Online Economic Empowerment," *International Journal of Advance Research, Ideas and Innovations in Technology*, vol. 9, no. 2, 2023.