



Digital Transformation of Boutique Operations Using a Smart Management Dashboard

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ABSTRACT

In many small-scale boutiques, customers are manually notified about order completion, measurements are taken with handwritten notes, and bills are paid by hand. These manual approaches often lead to delays and poor outcomes. This problem is addressed by automating the operations of small and medium boutiques through the introduction of a Smart Boutique Management System. The aim is to improve the user experience by automating customer communication on WhatsApp, allowing for order, customer information, and message updates while streamlining order requests and customer information management. The system's finance module enables users to manage boutique critical expenses like salaries, rent, and maintenance costs. Using modern web technologies, the developed solution is user friendly, operationally effective, and scalable to support emerging boutique enterprises. With the Smart Boutique Management System, both customer service and business operations are handled more efficiently, which increases accuracy, reduces communication problems, and removes

1. INTRODUCTION

Boutique management presents unique operational challenges in today's retail and customized services environment, particularly for small to medium-sized establishments. This project introduces a Smart Boutique Management System that aims to digitize and automate daily operations in boutique businesses to resolve these problems. The system has been specially developed to cater to the needs of boutique owners and staff, enhancing customer interaction and operational effectiveness. The proposed system provides a digital interface for safely and methodically handling customer information, measurements, and order tracking. The risk of error on the part of human users is significantly lowered by this digitisation, as well as improving the speed and accuracy of data entry. To ensure accessibility to users who have only basic technical competence, the system features an easy-to-use user interface. One of the key features of the system is the capacity to integrate with WhatsApp messaging. The process automatically informs the customer that an order is completed, which saves staff time and ensures timely notification. The customer experience can be enhanced by personalizing these messages with the customers' names and details regarding their orders. Personalized financial summaries can be accessed by boutique owners through a dashboard, enabling improved financial planning and informed decision-making.

2. REVIEW OF LITERATURE

2.1 Digital Transformation in Small Enterprises

Research has shown how small enterprises are progressively being assisted by tools such as Amazon Web Services to migrate from manual systems towards more streamlined and scalable processes through the use of cloud-based systems.

2.2 Technology in Customer Relationship Management

The emerging use of social CRM tools serves as a good example of how small to medium enterprises interact with their customers through digital channels, including but not limited to WhatsApp, to convert customer relations into marketing opportunities.

2.3 Financial Management Systems for SMEs

Research indicates that there is a lack of computerised accounting and financial monitoring systems for micro and small level businesses, which means that these businesses do not utilize advanced technology in transactions, accuracy and decision-making.

3. EXISTING SYSTEMS

Management of boutiques relied on manual processes and disparate digital workflows, often falling short of addressing the requirements of modern boutiques. However, in the recent past, many systems have cropped up to address specific needs pertaining to boutique and retail management. These facilities are most conveniently provided by Point of Sale, or POS, systems on a small and mid scale retail setting. Through applications such as Square POS and Shopify POS, sales, inventory, and billing transactions can be streamlined. These systems not only automate the checkout processes, but also facilitate the digital recording of customer purchase histories. However, most of them do not come equipped with industry measurement tracking and order-based tailoring support specific for boutiques. Among the CRM tools designed to manage customer specifics and interactions are Zoho CRM and HubSpot CRM. They aid in the storage of customer particulars as well as tracking interactions. While these platforms do significantly enhance the ease with which communications with customers are maintained, they are often overly sophisticated and built for large-scale enterprises, which makes them unsuitable for boutique-scale operations. Some tailoring businesses utilize a combination of basic phone applications and spreadsheets to keep track of measurements and order progress. Although they are practical and cheap, these solutions face high risks for data loss, do not include advanced search functionality, and lack proactive reporting or notification capabilities.

4. FIELD OF THE INVENTION

This invention relates to the field of digital business management systems with specific regard to automation for small boutiques and tailoring shops. It includes customer data management, order processing, automated communication, and finances in one system. The objective of the invention is to transform manual and paper administrative tasks common in boutiques into a digital solution to facilitate smoother operations, reduce human error, and improve satisfaction in services rendered. This system is enhanced with modern communication devices like WhatsApp which allows for real-time information updates on the progress of orders, making it applicable in the areas of retail fashion, tailoring, and small businesses.

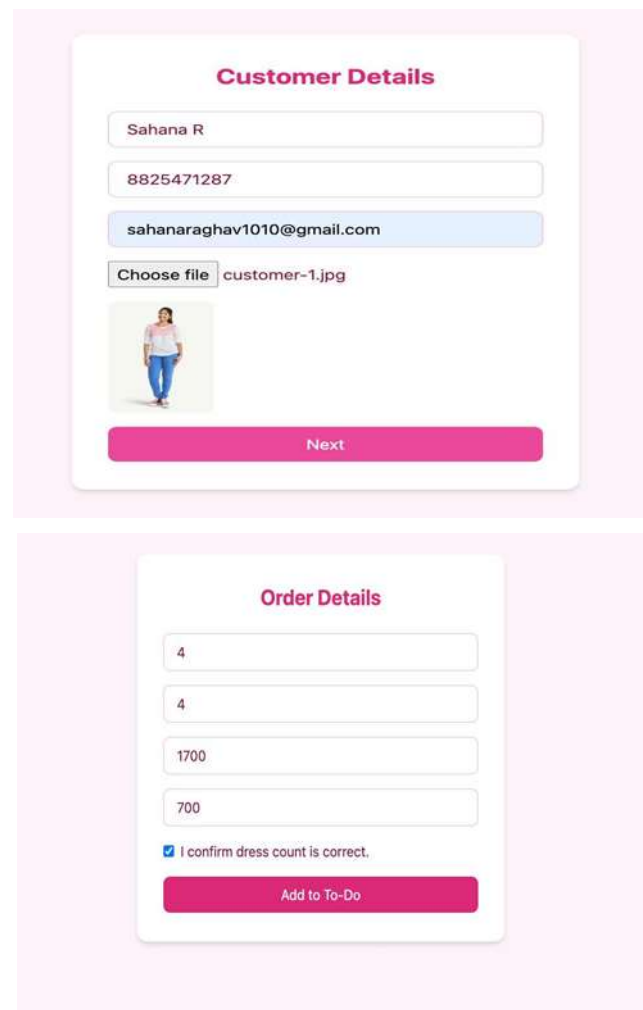
5. SOFTWARE DESCRIPTION

- Frontend: React.js
- Styling: Tailwind CSS
- Backend: Node.js & Express.js
- Database: MongoDB
- Machine Learning: Python
- Messaging Integration: WhatsAppTwilio API

1. Home page

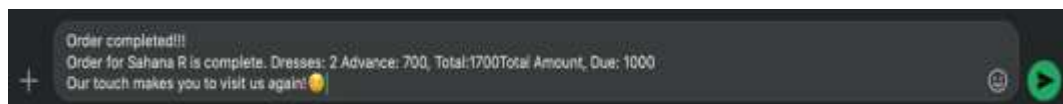


2. Form details

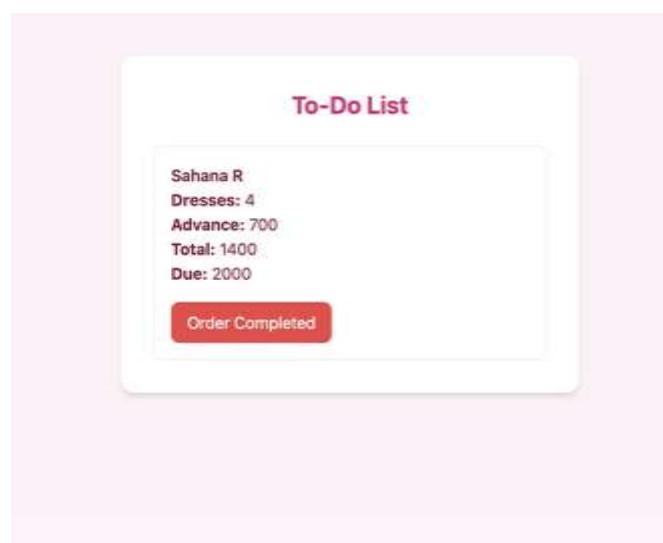


The image displays two forms from a mobile application. The first form, titled "Customer Details", contains input fields for the name "Sahana R", phone number "8825471287", and email "sahanaraghav1010@gmail.com". It also features a file selection button labeled "Choose file" with the chosen file "customer-1.jpg" and a small image of a person. A pink "Next" button is at the bottom. The second form, titled "Order Details", has input fields for the number of dresses (4), advance amount (4), total amount (1700), and due amount (700). It includes a checkbox "I confirm dress count is correct." which is checked, and a pink "Add to To-Do" button.

3. Whatsapp Interaction



4. Todo List



The image shows a "To-Do List" form. It contains a list of items for "Sahana R": "Dresses: 4", "Advance: 700", "Total: 1400", and "Due: 2000". Below the list is a red button labeled "Order Completed".

6. CONCLUSION

This requirement is satisfied by the Smart Boutique Management System, which is a fully digital solution specifically designed for boutique management. Provides an intuitive interface requiring little technical skill that integrates customer data entry, order management, measurement, billing and payment, even WhatsApp conversations.

By eliminating the only Challenges boutique owners face, this system enhance- customer engagement, reduced work volume, and improved accuracy. Rather than addressing mundane mistakes and clerical work, employees can concentrate on customer service and creativity. The Smart Boutique Management System is a revolutionary product that optimizes the management of boutiques in the context of advancing information technologies and greatly improves operational efficiency and client service.

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