

Tailor IT: Empowering Local Tailors through AI-Driven Hyperlocal PlatformSpacing

Rhutu Badiger¹, Sanjana Anantwar², Atharav Gole³, Harshavardhan pillay^{*4}

Department of Artificial Intelligence and Data Science, MMIT College, Lohgaon, Pune

Abstract

The conceptual model and literature review for Tailor IT, a hyperlocal digital platform intended to empower regional tailors and home-based stitching specialists, are presented in this paper. The platform seeks to modernise the conventional tailoring process by combining Artificial Intelligence (AI), Augmented Reality (AR), and effective delivery management. The study examines six previous studies on AI personalisation and digital tailoring in order to pinpoint current opportunities and constraints. The results show that although there are a number of tailoring applications, none of them particularly concentrate on enhancing local delivery services or empowering community-based tailors. By putting clients in direct contact with local tailors, the suggested system closes this gap and makes it possible for doorstep service, AI-based clothing measurement, and real-time order tracking.

Key Words: Local Tailors, Hyperlocal Services, AI Tailoring, AR Try-On, Digital Platform

1. INTRODUCTION

In-person measurements and manual order management are key components of India's traditional tailoring sector. Homebased stitching specialists and local tailors frequently deal with issues like inconsistent customer satisfaction, delayed deliveries, and inefficient workflow. Poor communication, restricted access to tailoring services, and lengthy store visits are problems for customers.

By developing a digital platform for hyperlocal tailoring services and combining AI and AR to provide virtual try-ons and personalised clothing recommendations, Tailor IT tackles these issues. In addition to offering local tailors a digital order management system, real-time tracking, and delivery optimisation, the system effectively links clients with tailors in the area.

Tailor IT 's digitisation of the tailoring process not only increases accuracy and efficiency but also gives local and homebased tailors more opportunities for employment and business expansion. Furthermore, it creates an open environment where clients and tailors can trust each other more by tracking orders, payments, and deliveries in real time. Additionally, the system facilitates customer interaction and feedback gathering, establishing a cycle of continuous improvement for service customisation.

1.1 Objectives

- Modernize local tailoring through a digital platform.
- Enable AI-driven personalized garment recommendations.
- Provide real-time order tracking and AI-optimized delivery.
- Improve accessibility and convenience for customers.
- Empower home-based tailors with employment and business growth opportunities.

1.2 Problem Statement

Local tailors frequently experience disarray and missed deadlines as a result of their inability to effectively track deliveries and manage orders manually. In contrast, customers experience poor communication, inconsistent measurements, and frequent delays during the tailoring process. Customers and tailors lose trust when there is no single digital platform for tailoring services, which lowers overall efficiency and transparency. As a result, both parties are unhappy, underscoring the

necessity of a cutting-edge, technologically advanced solution to optimise processes and enhance client satisfaction in the tailoring sector.

1.3 Motivation

This project aims to modernize the local traditional tailoring process by integrating AI, AR, and 3D modeling. It enhances convenience, personalization, and efficiency while empowering home-based tailors and improving customer satisfaction through virtual try-ons and automated delivery management.

2. LITERATURE SURVEY

Sr. No.	Paper Title	Authors / Year	Key Features / Contributions	Limitations / Research Gaps
1	Digital Transformation in Tailoring: Thread Express Application	UG Students & Assistant Professor, Rathinam Technical Campus, Coimbatore, Tamil Nadu, India / 2024	Introduces a digital platform to streamline tailor-client interactions, simplifying order processes.	Lacks AI-based personalization, virtual tryons, and delivery optimization.
2	Development of a Web Application for Custom Clothing Orders and Tailoring Services	Revathi A, Priyadharshini V / 2024	Web-based system for managing orders, measurements, and tailoring requests, enabling customers to place orders online.	Limited to web platform; no mobile support or AI/AR integration.
3	AI-Powered Personalization: Tailoring Customer Journeys in Real-Time	Mei Song, Massachusetts Institute of Technology / April 2024	Implements AI-driven recommendations for clothing based on user preferences and history, enhancing customer experience with personalization.	Focuses on customer side; doesn't address local tailors' workflow or delivery tracking.
4	How Artificial Intelligence Challenges Tailorable Technology Design	Pascal Fechner, Fabian König, Jannik Lockl, Maximilian Röglinger / May 2024	Explores AI's role in individualized technology design; presents frameworks for personalization and adaptive systems.	Theoretical study; not tailored for tailoring industry or hyperlocal services.
5	Tailor at Your Doorstep	Sourav Kumar, Vanshi Singh, Shivani Kumari, Dr. Rabindranath S / April 2024	Introduces doorstep tailoring model with app-based ordering and booking, focusing on customer convenience.	No AI/AR integration; limited delivery management and tracking.
6	AI Cloth Customizer	Keyur Parmar, Dr. Rajeshwari Tridevi / March 2025	Developed AI-driven clothing customization with virtual previews, improving engagement with AR features.	Focused on visualization; didn't cover backend workflow, local tailor empowerment, or hyperlocal delivery.

2.1 Research Gap

The majority of current research on tailoring applications focusses on large fashion industries and primarily aims to improve customer experience through AI-driven customisation and digital ordering. These solutions, however, ignore the requirements of regional tailors and in-home stitching specialists, who continue to use manual techniques for customer correspondence, order tracking, and measurement.

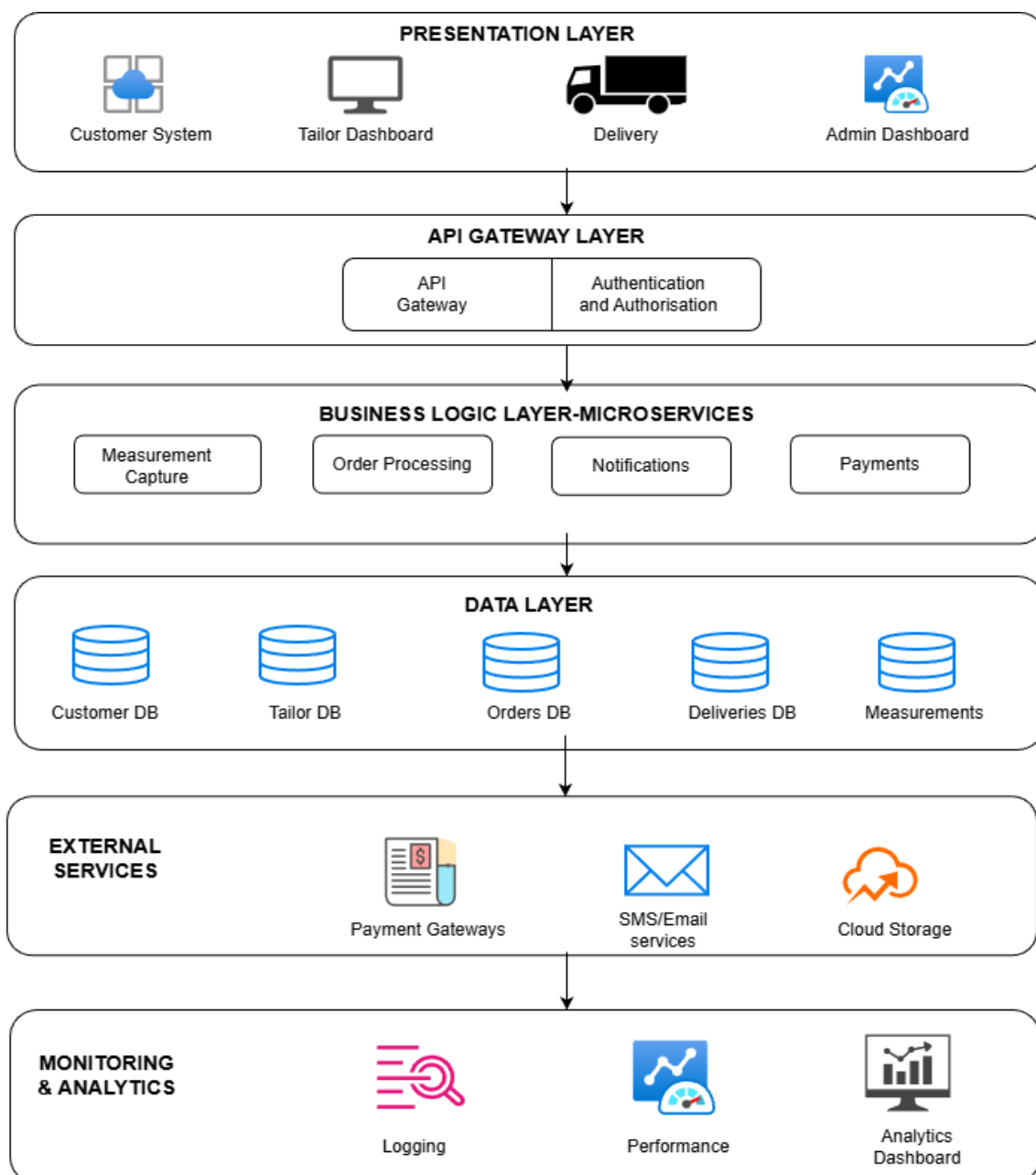
An integrated, hyperlocal platform that streamlines local tailors' entire workflow, from order placement to delivery, is lacking. Additionally, cutting-edge AI and AR technologies like virtual try-ons and predictive delivery scheduling are not included in current systems. In order to empower local tailors digitally and improve accessibility, efficiency, and personalisation for both clients and service providers, a platform such as Tailor IT is required.

2.2 Survey Analysis

The reviewed studies collectively show a strong shift toward digitalization in the tailoring and fashion industry. Researchers have explored how technologies like **AI, AR, and IoT** can transform the traditional tailoring process by offering features such as virtual fitting, online customization, and real-time tracking. Many applications aim to enhance **customer satisfaction** through personalization and convenience, allowing users to visualize designs and track their orders seamlessly.

However, while these innovations focus heavily on **customer experience**, most existing systems neglect the **local tailoring ecosystem**. Very few platforms are designed to support home-based tailors or small workshops struggling with manual operations. The survey highlights a clear need for a **hyperlocal digital platform** that not only improves customer convenience but also empowers local tailors through better visibility, automated workflow management, and technology-driven efficiency.

3. PROPOSED SYSTEM



4.CONCLUSION

This is not mandatory. The Tailor IT project demonstrates a transformative approach to modernizing the local tailoring industry by integrating AI, AR, and digital order management. Through this platform, local tailors and home-based stitching experts gain access to a structured workflow, real-time order tracking, and optimized delivery systems, while customers enjoy personalized garments, seamless communication, and doorstep services.

Our study highlights the importance of creating a hyperlocal digital ecosystem that not only enhances customer satisfaction but also empowers local artisans by increasing their visibility and operational efficiency. By combining advanced technologies with a user-friendly mobile interface, Tailor IT bridges the gap between traditional tailoring practices and the expectations of modern consumers.

In summary, the platform sets a benchmark for future digital solutions in the tailoring sector by providing a scalable, AI-driven, and customer-centric approach. It emphasizes the potential of technology to create meaningful employment, improve service quality, and foster stronger relationships between local tailors and their customers.

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