

# Software Engineering Project – Sep 2025



## Textile SaaS App

*AI-Driven Operational Excellence for the Textile Industry*

# Meet the Team

---



## Management & Scrum

**Afsal Sha:** Project Manager & Scrum Lead

**Joseph Manoj Louis:** Scrum Master

**Hari Govind J:** Scrum Master / Frontend  
Developer



## </> Development & QA

**Akash O.G:** Frontend / Backend Developer

**R Rahul Varma:** Frontend Developer / Tester

**Matlin Jeleshiya D:** Code Reviewer /  
Developer

**Vyshakh K V:** Backend Developer

# Project Purpose

---

## Bridging the Gap with AI

The core purpose of the **Textile SaaS App** is to revolutionize the traditional textile supply chain.

By integrating **Artificial Intelligence**, we aim to streamline operations for retailers, enhance discovery for customers, and optimize logistics for distributors and manufacturers.

Our ecosystem enables real-time sales forecasting, automated marketing, and seamless inventory management.



# Identifying User Segments

---



## Primary Users

Retail Shop Managers, Owners, and End Customers. The core operational and transactional base.



## Secondary Users

Distributors, Suppliers, and Marketing Agencies. The logistical and promotional connectors.



## Tertiary Users

Manufacturers and Brand Representatives. The production planning and strategic forecasting layer.

# Primary Users: Retailers

---

## Retail Shop Managers

Focused on day-to-day efficiency. Their key needs involve stock monitoring, supplier coordination, and social media content management.

## Shop Owners

Focused on business growth and profit optimization. They require high-level insights for supply chain efficiency and long-term planning.

**Key Goals:** Efficient stock management, AI-driven sales forecasting, automated supplier communication, and effortless social media marketing.

# Key Retailer User Stories

---

-  **Sales Summary:** "As a manager, I want to upload weekly sales data and get an AI summary in 2 minutes to plan restocking efficiently."
-  **Logistics Savings:** "As an owner, I want reorder suggestions grouped by distributor to save at least 10% on logistics costs."
-  **Demand Forecasting:** "As a manager, I need next-quarter demand forecasts to plan purchases a month in advance."
-  **Instant Marketing:** "As a manager, I want ready-to-post marketing images and captions for new batches within 1 minute."

# Primary Users: End Customers

---

-  **Visual Search:** Search for matching fabrics nearby by simply uploading a photo.
-  **Discovery:** Use an AI-enabled map to find shops with specific stock availability.
-  **Reviews:** Rate shops and view trending patterns to make informed decisions.



**Key Goals:** Seamless product discovery via AI visual search, real-time access to local stock availability, informed purchasing decisions through community trends/reviews, and rapid location of desired fabrics nearby.

# Secondary Users: Distributors & Marketers

---

## Distributors / Suppliers

**Goal:** Efficiently respond to stock inquiries and track retailer demand.

*"I want to visualize regional fabric demand on a heatmap to plan personalized promotions and replenishment."*

## Marketing Agencies

**Goal:** Leverage aggregated AI insights for targeted campaigns.

*Identify trending fabrics, colors, and regional demand to find potential retail partners for collaboration.*

# Unified SaaS Ecosystem – Textile SaaS App



## Shop Owners

Gain actionable Sales & Inventory Insights via AI while publishing and marketing stock to the public marketplace.



## Customers

Experience real-time Product Visibility, browsing live inventory from local shops to find matching fabrics instantly.



## Distributors

Monitor Regional Stock Levels to proactively pitch replenishment offers to retailers before they run out.

# Shop Manager Interface

**Shop Manager**  
Welcome back! Here's your business overview.

**Avg Order Value** ₹27,990 +10% vs last period

**Pending Reorders** 1 -10% vs last period

**Customer Rating** 1★ +10% vs last period

**Growth** -64.6% +10% vs last period

**Sales Summary** Last 7 Days

Sales decreased by 67.4% compared to last week. Cotton showing highest demand (45%).

**Total Quantity** 69 **Total Revenue** ₹139,950 -67.4%

**Daily Breakdown**

**Next Quarter Demand Forecast**

**Predicted Quarter Revenue** ₹5,235,598 Low Confidence

**Top Categories**

- Cotton +100% 8,231 units
- Silk +100% 7,852 units
- Linen +100% 6,601 units

**Monthly Breakdown**

- DECEMBER ₹1,786,263
- JANUARY ₹1,786,263
- FEBRUARY ₹1,539,882

**Smart Reorder Suggestions**

Distributor 1 (ID: 7)  
1 item(s) to reorder

**Graph ai assistant and insight**

**Ai Powered insight**

**Sales Growth Trend**

-67.4% ₹139,950 total revenue

**AI-Powered Insights**

- Opportunity Day** Monday had 50% less sales. Run Monday specials!
- Pricing Power Up** Avg. revenue per item is ₹2,028 (+21% vs last week). Premium products are selling!
- Healthy Category Mix** Revenue well-distributed across categories. Great portfolio balance!
- Strong demand for Cotton** North leads regional textile demand at 265,750 units, followed by South (193,400) and West (168,800), reflecting strong market traction. Cotton remains the top product, signaling sustained consumer preference. While Central (106,900) and East (159,300) show comparatively lower demand, growth trends are positive.

**Upload Sales Data** **History**

# Customer Interface

Textile SaaS app

Home Products Shops Profile customer1

Search fabrics, products, or shops...

Filters

All Categories Any Price Top Rated In Stock Only

20 products found

COTTON  
Premium Cotton Fabric Roll  
₹1,500 /meter  
★★★★★ 4.0  
Royal Silk Emporium  
In Stock (15 available)

[View Details →](#)

SILK  
Tussar Silk Fabric  
₹3,500 /meter  
★★★★★ 4.0  
Royal Silk Emporium  
In Stock (31 available)

[View Details →](#)

LINEN  
Pure Linen Fabric  
₹2,200 /meter  
★★★★★ 4.0  
Royal Silk Emporium  
In Stock (42 available)

[View Details →](#)

WOOL  
Wool Blend Fabric  
₹2,800 /meter  
★★★★★ 4.0  
Royal Silk Emporium  
In Stock (40 available)

[View Details →](#)

SILK  
Chanderi Silk Cotton  
₹2,800 /meter  
★★★★★ 4.0  
Royal Silk Emporium  
In Stock (45 available)

[View Details →](#)

COTTON  
Handloom Cotton  
₹1,800 /meter  
★★★★★ 4.0  
Royal Silk Emporium  
In Stock (45 available)

[View Details →](#)

GEOGETTE  
Georgette Fabric

CHIFFON  
Chiffon Silk

KHADI  
Khadi Cotton

VELVET  
Velvet Fabric

NET  
Net Fabric Embroidered

RAYON  
Rayon Printed

CREPE  
Crepe Fabric

Image and voice search

Assistant

Hi! I'm the Textile Assistant. How can I help you today?

im looking for wool blend fabric

Certainly! We have Wool Blend Fabric available at Royal Silk Emporium (Rating: 1.0/5) in Mumbai for ₹2800.00. This soft wool blend fabric, composed of 60% wool and 40% polyester, is perfect for winter garments.

Chatbot

Ask about fabrics...

# Distributor Interface

## AI Production Planning

AI-powered insights for production optimization, stock replenishment, and targeted marketing

### AI Strategic Analysis

The single shop maintains **healthy stock levels overall**, but vigilance is required for **1 low-stock product** (specific name unavailable in data). No critical shortages or high-demand risks are currently detected.

- Key Findings
  - 1 unnamed low-stock product** requires attention (exact stock quantity unspecified) to prevent potential shortages in the sole shop.
  - \*\*100% of

### Strategic Recommendations

- Review all critical stock items
- Focus on fast-selling products to maintain stock availability
- Implement daily monitoring for fast-moving inventory

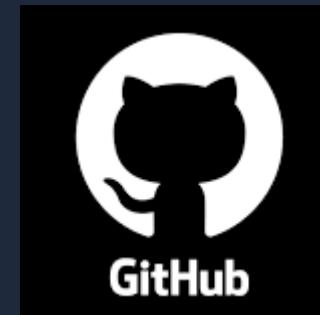
## Stock Impact

Product wise  
requirement

PRODUCT	SHOP	STOCK LEVEL	UNITS SOLD	UNITS AT RISK	RESTOCK QTY	STATUS
Premium Cotton Fabric Roll Cotton	Royal Silk Emporium	<div style="width: 75%;">75%</div>	72	2	15	<span>Warning</span>
Rayon Printed Rayon	Royal Silk Emporium	<div style="width: 204.5%;">204.5%</div>	55	0	0	<span>Healthy</span>
Khadi Cotton Khadi	Royal Silk Emporium	<div style="width: 280%;">280%</div>	50	0	0	<span>Healthy</span>
Art Silk Silk	Royal Silk Emporium	<div style="width: 295%;">295%</div>	36	0	0	<span>Healthy</span>
Handloom Cotton Cotton	Royal Silk Emporium	<div style="width: 250%;">250%</div>	35	0	0	<span>Healthy</span>
Pure Linen Fabric Linen	Royal Silk Emporium	<div style="width: 280%;">280%</div>	33	0	0	<span>Healthy</span>
Kota Doria Cotton	Royal Silk Emporium	<div style="width: 253.3%;">253.3%</div>	27	0	0	<span>Healthy</span>
Chiffon Silk Chiffon	Royal Silk Emporium	<div style="width: 320%;">320%</div>	22	0	0	<span>Healthy</span>
Organza Silk Organza	Royal Silk Emporium	<div style="width: 275%;">275%</div>	17	0	0	<span>Healthy</span>
Chanderi Silk Cotton Silk	Royal Silk Emporium	<div style="width: 375%;">375%</div>	15	0	0	<span>Healthy</span>

# Tech Stack

---



# Q & A

Thank you for your attention.