



Smart Stock Inventory Optimization for Retail

Presented by P. Durga Prasad

The Challenge: Managing Retail Inventory



Efficient inventory is crucial for retail success. However, many stores face:

- Stockouts: Lost sales, unhappy customers
- Overstocking: Wasted capital, reduced profit margins
- Manual processes: Time-consuming, prone to error



Introducing Smart Stock Inventory

Our solution leverages data and automation to optimise inventory levels.

Real-Time Tracking

Monitor stock levels across all items and stores instantly.

Predictive Analytics

Forecast demand to prevent stockouts and overstocking.

Automated Alerts

Receive notifications for low stock or potential issues.



The Database Foundation

A robust system underpins our smart inventory solution.

Database Creation

`smart_stock_inventory` for all data.



`time_series_data` Table

Stores critical sales and stock information.

Key Fields

Date, Item, Store, Stock, Status, Sales.

Data in Action: Sample Records

Observe how daily data tracks stock movement and status.

2025-01-01	Shampoo	101	1	50	In-Stock	12
2025-01-02	Shampoo	101	1	38	Low-Stock	20
2025-01-03	Shampoo	101	1	25	Low-Stock	15
2025-01-04	Shampoo	101	1	0	Out-of-Stock	0
2025-01-01	Soap	102	1	80	In-Stock	30
2025-01-02	Soap	102	1	45	Low-Stock	35
2025-01-01	Rice Bag	201	2	200	In-Stock	40
2025-01-03	Rice Bag	201	2	80	Low-Stock	60

Benefits for Retail Operations

Implementing Smart Stock Inventory yields significant advantages:

1

Increased Sales

Avoid stockouts, ensure product availability.

2

Reduced Costs

Minimize overstocking and waste.

3

Improved Efficiency

Automate ordering, save staff time.

4

Enhanced Customer Satisfaction

Consistent product availability and choice.





SQL Fundamentals for Smart Stock

- SELECT Queries - Retrieve specific inventory data
- WHERE Clauses - Filter data for specific items
- JOIN Operations - Combine information from different tables
- Aggregate Functions - Perform calculations on data
- ORDER BY Clause - Sort results by relevant criteria

Thank You for Your Attention❤️

We appreciate your time and interest in Smart Stock. For any further questions or inquiries, please feel free to contact us.

📞 Contact no: 7671883180

Special Thanks to SHAKTHI GOPALKRISHNAN MAM and My Group Members

