



Supply Chain Management Report:

College Code: 1128

College Name: TJS Engineering College Department: CSE

Student NM-ID: aut112823CSE53

aut112823CSE54

aut112823CSE19

aut112823CSE14

Roll No: 112823104053

112823104054

112823104019

112823104014

Date: 09-05-2025

Project Title: Supply Chain Management

Phase4: Performance of the Project

Title : Supply Chain Management

Objective:

The focus of Phase 4 is to enhance the performance of the AI-Driven Supply Chain Optimization System by refining predictive analytics models, optimizing logistics automation, and improving scalability to handle large-scale operations. This phase also aims to strengthen data security, streamline IoT integration for real-time tracking, and ensure seamless supplier collaboration.

1. AI Model Performance Enhancement

Overview:

The AI-based demand forecasting and inventory optimization models will be refined using historical data and real-time inputs.

Performance Improvements:

- ✓ Accuracy Testing: Retrain models with expanded datasets
- ✓ Model Optimization: Hyperparameter tuning for better decisions

Outcome:

20% improvement in demand forecasting accuracy

2. Logistics Automation Optimization:

Key Enhancements:

- 🚚 Dynamic routing with real-time traffic data
- ⌚ Automated scheduling for fleet management

Outcome:

15% reduction in delivery times

3. IoT Integration for Real-Time Tracking:

Key Features:

- 📍 GPS and RFID tracking
- 🔄 Real-time warehouse sensors

Outcome:

25% reduction in shipment delays

4. Data Security Enhancements:

Implemented Solutions:

- 🔒 Blockchain for secure transactions
- 👤 Role-based access control

Outcome:

Tamper-proof supplier collaboration

Performance Metrics:

Area	Improvement Target
-----	-----
Forecasting	+20% accuracy
Logistics	-15% delivery time
Inventory	-30% stockouts

Submitted By:

(Team-6)

NAVEEN A

NITHIN S C

GANESAN A

DHIVAKAR S
