Slide 5 – Literature Review (Top 5 Papers)

Paper 1

Title: E-Commerce Demand Forecasting Model and Market Dynamic Regulation Algorithm Based on Big Data Analysis

Authors: Zhang et al.

Published: IEEE, 2023

Key Point: Integrates LSTM for forecasting and RL for dynamic pricing regulation. (Base Paper)

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Paper 2

Title: Smart Retail: Utilizing Machine Learning for Demand Prediction, Price Strategy, and Inventory Management

Authors: Kumar et al.

Published: IEEE, 2022

Key Point: Uses Random Forest for forecasting and pricing decisions in retail.

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Paper 3

Title: A Hybrid Gradient Boosting Algorithm for Dynamic Pricing Using a Custom Dataset

Authors: Lee et al.

Published: IEEE, 2023

Key Point: Introduces hybrid boosting methods like XGBoost and NGBoost for dynamic pricing optimization.

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Paper 4

Title: Artificial Intelligence and Dynamic Pricing Strategies: Enhancing Competitiveness in E-Commerce

Authors: Davis et al.

Published: IEEE, 2021

Key Point: Explores AI-driven approaches for competitive pricing in online retail.

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Paper 5

Title: Quotidian Sales Forecasting using Machine Learning

Authors: Patel et al.

Published: IEEE, 2022

Key Point: Focuses on accurate daily sales forecasting using XGBoost.

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Slide 6 – Summary of Literature Review

1. Paper 1 – E-Commerce Demand Forecasting & Market Regulation

Introduces a combined approach using LSTM for forecasting and reinforcement learning for pricing.

Provides a strong theoretical base for building integrated systems like our project.

2. Paper 2 – Smart Retail

Demonstrates the practical use of Random Forest for demand forecasting and pricing.

Highlights how retail businesses can optimize inventory and sales strategies.

3. Paper 3 – Hybrid Gradient Boosting for Dynamic Pricing

Shows how boosting algorithms outperform traditional models in dynamic pricing tasks.

Provides insights for improving our pricing engine accuracy.

4. Paper 4 – AI and Dynamic Pricing Strategies

Focuses on strategic and theoretical aspects of using AI in e-commerce pricing.

Useful for understanding market-level pricing rules and policies.

5. Paper 5 – Quotidian Sales Forecasting

Demonstrates daily time-series forecasting using machine learning techniques like XGBoost.

Helps in setting up strong demand forecasting models for our system.