Multi-Agent System for Flipkart - AI/GenAI Use Case Generation

1. Introduction

This project focuses on building a Multi-Agent Architecture to perform market research and generate AI/GenAI use cases for Flipkart, a major player in the Indian E-commerce industry. The system automates industry understanding, trend analysis, use case creation, dataset collection, and proposes AI solutions.

2. System Architecture

Architecture Overview:

Start: Company/Industry Input

   -> Agent 1: Research Agent (Research Flipkart services, focus areas)

   -> Agent 2: Market Standards Agent (Analyze retail AI trends)

   -> Agent 3: Use Case Generator Agent (Create use cases)

   -> Agent 4: Resource Collector Agent (Find datasets)

   -> [Optional] Agent 5: GenAI Solutions Proposer (Suggest chatbots, doc search)

   -> Final Proposal Report

3. Methodology

- Conduct company and industry research.

- Analyze AI trends.

- Generate use cases.

- Search for datasets.

- Propose GenAI solutions.

4. Research Insights About Flipkart

Industry: E-commerce & Retail

Core Offerings: Marketplace, Wholesale, Groceries, Logistics

Focus Areas: Personalization, Logistics Optimization, Customer Experience, Fraud Detection

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5. Generated AI/GenAI Use Cases

- Personalized Product Recommendations

- AI Chatbots for Customer Service

- Dynamic Pricing Models

- Inventory Optimization

- Delivery Route Optimization

- GenAI Review Summarization

- Fraud Detection & Prevention

- Visual Search

6. Resource Asset Collection (Datasets)

- E-commerce Dataset for Recommendations (Kaggle)

- Customer Support Chat Logs (Kaggle)

- Retail Product Reviews (Kaggle)

- Retail Product Image Dataset (Kaggle)

- Fraud Detection Dataset (Kaggle)

7. Bonus: GenAI Solution Proposals

- Document Search System

- AI Chatbots for Customer Queries

- Automated Report Generation

8. Conclusion

The multi-agent system provides a complete market research framework, curated AI/GenAI use cases, real-world datasets, and bonus GenAI applications tailored for Flipkart. This will enhance customer satisfaction, operational efficiency, and innovation capabilities.