

# SmartOlive Price Negotiator

The SmartOlive Price Negotiator is an AI-powered system that enables customers to negotiate prices for high-end AI-driven home appliances in real time. The interactive chatbot guides customers through a personalized negotiation process while ensuring the company maintains a minimum 10% profit margin. The system is built using Streamlit for the frontend, FastAPI for the backend, and Google Gemini for the AI-powered conversation engine.

## Key Features

- **Interactive Chat Interface:** Customers can negotiate prices in real-time through a conversational chatbot.
- **Product Listings:** Detailed product descriptions, including prices, power usage, and warranties, are shown in a sidebar.
- **Bulk Discounts:** The AI offers discounts and free transportation for bulk orders or polite negotiations.
- **Transportation Calculation:** Automatically computes transportation fees based on order size and distance, with free delivery within Coimbatore for bulk orders.
- **Step-by-Step Negotiation:** The AI gradually offers discounts while ensuring a minimum 10% profit, never revealing the manufacturing price.

## Technology Stack

- **Frontend:** Streamlit for building the chat interface and product display.
- **Backend:** FastAPI to handle API requests and connect to the AI model.
- **AI Model:** Google Gemini, integrated through LangChain, for generating conversational responses.
- **Memory Management:** MemorySaver retains conversation history for consistent dialogue.

## Functionality

- **Real-Time Negotiation:** Customers interact with the AI to negotiate prices for AI-driven appliances.
- **AI Strategy:** The AI adjusts offers based on customer behavior, applying discounts for bulk orders and polite negotiation.
- **Transportation:** Calculated based on distance, with free delivery for bulk orders within Coimbatore.

## Future Enhancements

**Expanded Product Range:** Dynamic product updates from a database.

**User Authentication:** Personalize the negotiation experience for returning customers.

**Advanced Negotiation:** Add real-time competitor price comparison and dynamic pricing models.