

Agentic Foodie

Voice-Powered Restaurant Ordering Assistant

RAISE YOUR HACK 2025 | Hackathon Submission

By [Binge Thinkers]



Groq API



Llama 3



LiveKit

A multi-agent AI product: Hands-free, intelligent ordering for restaurants.

Problem & Vision

The Problem



- 🕒 Inefficient Process:** Long wait times and order errors frustrate customers and reduce table turnover
- ♿ Accessibility Barriers:** Traditional ordering excludes visually impaired customers and those with language barriers
- 💰 Missed Opportunities:** Staff rarely suggest optimal upsells or promote special offers consistently
- 👥 Staffing Challenges:** Restaurants struggle with labor costs and maintaining service quality

Our Vision



- 💬 Natural Interaction:** Voice-powered ordering that feels like talking to a knowledgeable server
- 👤 Universal Access:** Making restaurant ordering accessible to everyone
- 🤖 Intelligent Assistance:** AI agents that understand context, preferences, and suggest personalized recommendations
- 📈 Business Growth:** Increasing average order value while reducing operational costs

Agentic Foodie transforms the restaurant experience with a hands-free, intelligent voice assistant that enhances both customer satisfaction and business outcomes.

Solution Overview



How It Works

Core Capabilities

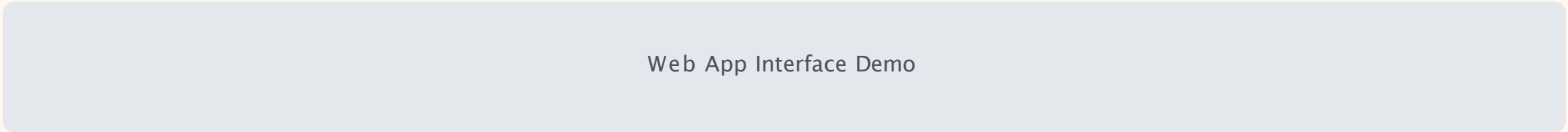
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Natural Interaction
Users speak or type their order in everyday language. Our system understands context, questions, and special requests.
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Agent Collaboration
Multiple specialized agents work together: inventory checking, recommendations, and customer service handled seamlessly.
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AI Understanding
Llama 3 model via Groq API processes natural language, extracting intent, items, quantities, and preferences accurately.
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Real-time Voice
LiveKit integration enables bi-directional voice streaming for a natural, conversational experience.



Key Features

Transforming restaurant ordering with powerful AI capabilities



Voice & Text Ordering

Natural voice and text ordering with real-time transcription and LLM interpretation for a seamless experience



Interactive Menu

Rich, interactive menu display with dietary tags and dynamic promotions that update in real-time



Multi-Agent System

Intelligent agents handling inventory, recommendations, and conversations for a smarter ordering flow



User-Friendly Cart

Intuitive order management with visual confirmation and seamless checkout process



Smart Upselling

Intelligent upsell and combo deal logic built directly into the dialog flow for increased value



Live Demo

Scan QR code to experience Agentic Foodie on your device

Technology Stack

Powerful tools working together to create a seamless experience



Groq API with Llama 3

Powers our conversational intelligence with lightning-fast responses



Streamlit

Enables rapid prototyping with beautiful, responsive UI components



LiveKit

Provides bi-directional real-time voice streaming capabilities



Fetch.ai Agentic Framework

Implements MCP and Agent patterns for modular logic



Core Technologies

The foundation of our application



SpeechRecognition + Pydub

Audio processing and transcription



Python + Asyncio + Threading

Responsive, non-blocking operations



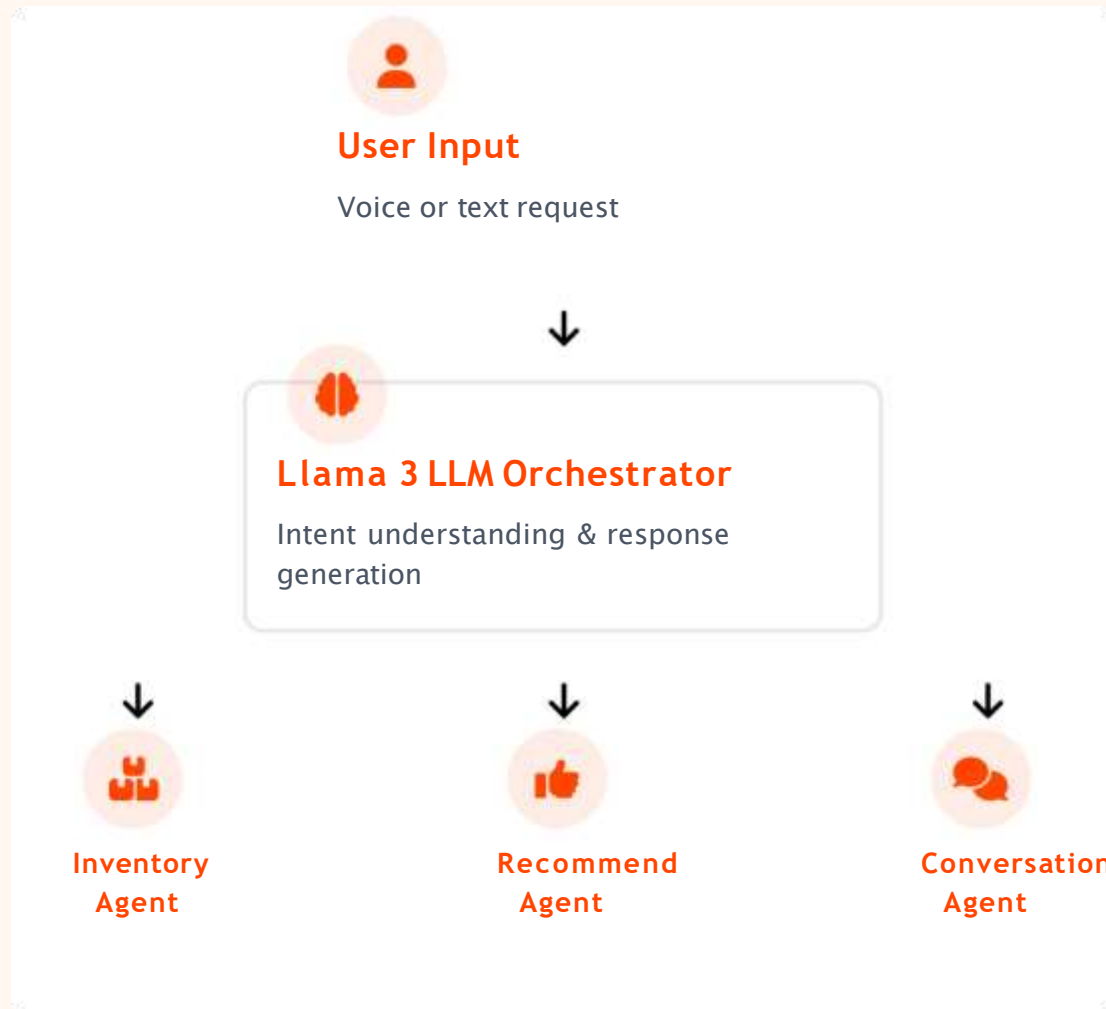
Custom CSS Styling

Premium app feel with responsive design


UI Layer → Agent Layer → AI Layer

Our tech stack combines the best of AI, voice processing, and modern web technologies.

Architecture & Agent System



Multi-Agent Architecture

-  **Modular AI Agents**
Specialized agents handle inventory checks, personalized recommendations, and conversation flow
-  **MCP Protocol Integration**
Model Context Protocol ensures clean task separation and easy agent extensibility
-  **LLM Orchestrator**
Central LLM interprets customer intent and coordinates agent responses for coherent experiences
-  **Smart Routing & Response Flow**
User inputs intelligently routed to appropriate agents for contextual, helpful responses

Hackathon Compliance & Integration

Core Requirements

✓ GROQ API

✓ LLAMA 3

- ✓ **Groq API Integration**
Fully implements Groq for fast, reliable AI responses
- ✓ **Llama 3 Model Implementation**
Leverages Llama 3-8b-8192 for natural language understanding
- ✓ **Prosus Track Compatibility**
Designed for enterprise applications with agent-based architecture

Extensibility & Deployment

-  **MCP Agent System (Bofius)**
Implemented Model Context Protocol for agent coordination
-  **Partnership Tech Integration**
Ready for Coral, Fetch.ai, and Snowflake integrations
-  **Production-Ready Architecture**
Easy web UI, scalable cloud APIs, open source codebase

Hackathon Tech Stack

 Groq API +  Llama 3 +  LiveKit +  MCP

Agentic Foodie meets and exceeds hackathon requirements while delivering a real-world applicable solution.

Business Value & Real-World Impact

Transforming restaurants and customer experiences with AI



Operational Efficiency

Lowers restaurant labor costs while boosting average order value through intelligent, dynamic upselling that never misses an opportunity.



Universal Accessibility

Makes ordering accessible for visually impaired or busy customers, broadening restaurant appeal and improving inclusion.



Enhanced Customer Experience

Provides instant product recommendations and personalized suggestions, increasing customer satisfaction and loyalty.



Future-Ready Insights

AI-powered analytics into ordering trends and customer preferences, enabling data-driven menu optimization and business growth.

Ready to revolutionize restaurant experiences with AI.

