

AI Agent Project Documentation

This document provides complete details about the AI Agent project, including its functionalities, architecture, supported technologies, multilingual support (all major Indian languages), market value analysis, and flow diagrams for better understanding. The AI Agent is designed to handle real-time telephony conversations, customer support automation, and business process assistance.

Key Features:

- Handles multiple calls simultaneously
- Real-time speech-to-text and text-to-speech
- Supports all major Indian languages (Hindi, Gujarati, Marathi, Tamil, Telugu, Kannada, Malayalam, Punjabi, Bengali, etc.)
- Integrates with telephony (.NET or Python)
- Can be used in customer support, healthcare, banking, and retail industries
- Scalable architecture with cloud/on-premise deployment options

Technology Stack:

Component	Technology
Speech-to-Text	Whisper / Azure Cognitive Services
Text-to-Speech	VITS / Google TTS / Azure
Core AI Brain	Python + LangChain + LLMs (HuggingFace, OpenAI optional)
Telephony Layer	.NET (C#) or Python (Twilio, Asterisk)
Frontend	React / Angular
Backend	FastAPI / .NET Web API
Database	PostgreSQL / MongoDB

Market Value & Pricing:

Currently, AI call automation solutions in India are priced between **■5 Lakhs – ■20 Lakhs** for enterprise setups, depending on scale and feature depth. Subscription-based models charge around **■500 – ■2000 per agent per month**. Our AI Agent, being multilingual and production-ready, falls in the premium category.

High-Level Workflow:

1. Incoming Call → AI Agent receives via telephony API
2. Speech-to-Text → Converts caller's voice into text
3. AI Brain (LLM + Knowledge Base) → Understands intent and prepares response
4. Text-to-Speech → Converts AI response into natural voice
5. Reply back to caller in their language

This AI Agent project represents a scalable, multilingual, production-ready solution for intelligent call handling and automation. It can serve enterprises across multiple domains and significantly reduce costs while improving customer experience.