

Backend Engineering Internship - proPAL AI

proPAL AI is an indigenous Voice AI platform revolutionizing how small and medium businesses (SMBs) in India interact with their customers. We are building multilingual voice agents that can talk naturally in Indian languages and dialects, enabling businesses to automate calls, support, and outreach at scale.

Task Overview-Backend Engineering

Your task is to develop a simple AI voice agent using Livekit. The agent should be capable of conducting a voice-based conversation using a real-time pipeline of:

Speech-to-Text (STT)

Text generation (LLM)

Text-to-Speech (TTS)

Core Requirements:

1. You must build a simple agent session pipeline that includes: stt, tts, llm etc. The agent must be able to handle interruptions during conversation.
2. During every call session log and capture the metrics into an excel file. Mainly include EOU delay, TTFT, TTFB, total latency. You can even log the usage summary at the end of the call.
3. Try to keep the latency below 2s, you can check this by capturing the metrics.

Tools & recommendation:

1. Refer to the official Livekit Documentation: <https://livekit.io/docs>
2. Use the Livekit Agent Playground to test your agent.
3. Prefer free or trial APIs

STT: Deepgram (free tier), Whisper (open source) etc.

TTS: ElevenLabs (trial), Cartesia (free trial) etc.

LLM: GPT with OpenAI (together) etc.

Use an environment variable to securely store API keys