# Live-Assist AI: Real-Time Negotiator & Sales Recommender

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## 1. Problem Statement

In high-stakes conversations such as sales calls, loan negotiations, donor meetings, and sponsorship discussions, professionals often struggle to capture every detail, respond effectively to objections, and personalize their approach. Important opportunities are lost due to missed cues, manual note-taking, lack of real-time support, and poor follow-up. This leads to reduced deal conversions, weakened trust, and inefficiencies in workflows across industries.

## 2. Proposed Solution

We propose an **AI-Powered Real-Time Recommendations and Negotiation Assistant** that acts as a smart co-pilot during important conversations such as sales calls, financial discussions, fundraising meetings, and sponsorship negotiations. The system captures live audio from meetings through a **Virtual Audio Cable**, converts it into text using a **speech recognition module**, and performs **sentiment analysis** to detect tone, hesitation, or objections. This enriched text is then passed to a **Large Language Model (LLM)**, which generates actionable insights in real time. The assistant delivers these insights back to the user through a **web-based interface**, providing:

- Suggested dialogues to handle objections.
- Negotiation strategies tailored to the customer's sentiment.
- Pricing recommendations and upsell/cross-sell opportunities.

After each meeting, the assistant automatically generates a **structured summary** with key decisions and action items, which is stored in the customer's profile for future personalization. When the same customer or stakeholder returns, the system recalls past interactions and enables more meaningful, trust-building discussions.
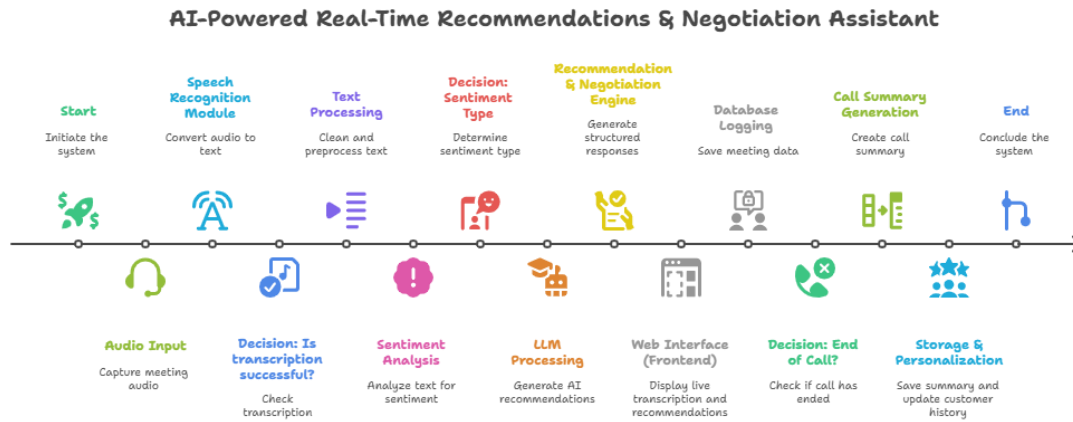
This solution transforms conversations into opportunities by combining **real-time intelligence, personalized recommendations, and memory-driven engagement**, making interactions more effective, transparent, and impactful across industries.

## 3. Key Features

- **Real-Time Audio Capture** – Seamlessly captures live conversations from calls or meetings via Virtual Audio Cable.
- **Instant Transcription** – Converts speech to accurate text using advanced speech recognition APIs.
- **Sentiment Analysis** – Detects customer tone, mood, and objections to guide empathetic, context-aware responses.
- **AI-Powered Recommendations** – Provides live negotiation tips, pricing options, objection-handling strategies, and upsell/cross-sell opportunities.
- **Suggested Dialogues** – Generates ready-to-use conversational cues to help users respond confidently in real time.
- **Automated Call Summaries** – Creates structured notes with key points, decisions, and action items after every meeting.
- **Customer Memory System** – Stores past interactions, enabling personalized offers and consistent relationship management.
- **Web-Based Interface** – Clean, user-friendly dashboard to view transcription, AI suggestions, and summaries in real time.
- **CRM & Data Integration** – Connects with databases and CRM tools (Firebase, MongoDB, Salesforce, etc.) for seamless workflow integration.

- **Scalable & Multi-Industry Use** – Adaptable to diverse domains like finance, NGOs, event sponsorships, education, and healthcare.

## 4.Process Flow



**AI-Powered Real-Time Recommendations & Negotiation Assistant**

| Start | Speech Recognition Module | Text Processing | Decision: Sentiment Type | Recommendation & Negotiation Engine | Database Logging | Call Summary Generation | End |
|---|---|---|---|---|---|---|---|
| Initiate the system | Convert audio to text | Clean and preprocess text | Determine sentiment type | Generate structured responses | Save meeting data | Create call summary | Conclude the system |

| Audio Input | Decision: Is transcription successful? | Sentiment Analysis | LLM Processing | Web Interface (Frontend) | Decision: End of Call? | Storage & Personalization |
|---|---|---|---|---|---|---|
| Capture meeting audio | Check transcription success | Analyze text for sentiment | Generate AI recommendations | Display live transcription and recommendations | Check if call has ended | Save summary and update customer history |

## 5.Use Cases

### 1. Banking & Finance – Loan Officers
- **Scenario:** Loan officer discussing terms with a customer.
- **How AI Helps:**
  - Suggests alternative EMI plans if customer hesitates.
  - Handles objections like "interest rate too high" with personalized counter-offers.
  - Upsell: Recommend credit card or insurance product along with the loan.

### 2. Mutual Funds & Investment Advisors
- **Scenario:** Advisor explaining investment options to a client.
- **How AI Helps:**
  - Provides real-time risk vs return recommendations.
  - Suggests suitable mutual funds based on customer profile.
  - Handles objections: *"Market is risky" → Suggests SIP strategy or safer bonds.*
  - Personalized upsell: *"Since you are investing ₹50k, you may consider tax-saving ELSS funds."*

### 3. NGOs – FCRA Fundraising & Donor Conversations
- **Scenario:** NGO representative talking to donors or foreign funding agencies.
- **How AI Helps:**
  - Provides **live negotiation tips** during funding discussions.
  - Suggests better framing of impact metrics if donor shows hesitation.
  - Objection handling: *"We already support other NGOs" → Suggest unique value proposition.*
  - Personalized follow-up: Reminds rep about donor's past contributions.

### 4. Event Management – Sponsorship Negotiations
- **Scenario:** Event team pitching sponsorship packages to companies.
- **How AI Helps:**
  - Suggests alternative sponsorship tiers if budget is an issue.
  - Provides **dialogues** like: *"We can feature your brand at multiple sessions instead of one."*
  - Highlights upsell: Adding branding on merchandise, social media shoutouts, or exclusive panels.
  - Generates structured **post-call summary** for team's follow-up with sponsor.

### 5. Corporate B2B Sales Teams
- **Scenario:** Tech company pitching SaaS solutions to clients.
- **How AI Helps:**

- o Live transcription ensures no feature requests are missed.
- o Suggests **discount strategies** (e.g., bundle licenses).
- o AI recalls **past conversations**: "Client previously asked about security compliance."
- o Improves **conversion rates** by giving in-call coaching

## 6. Healthcare – Insurance Negotiation Calls
- **Scenario:** Insurance company rep negotiating premium plans with customers.
- **How AI Helps:**
  - o Suggests flexible premium structures if objection arises.
  - o Provides dialogues like: *"If you add your spouse, you get 15% discount."*
  - o Upsell: Critical illness rider or add-on packages.

## 7. Educational Institutions – Admissions & Sponsorships
- **Scenario:** Universities/colleges talking to students/parents or sponsors.
- **How AI Helps:**
  - o Suggests financial aid options during fee negotiations.
  - o Recommends upsell: Alumni membership, certification add-ons.
  - o Sponsorship negotiation for events: *"Company X can sponsor our hackathon and get talent pipeline access."*

Our system is **not just sales-specific**, it's a **universal real-time negotiation coach** for:
- **Financial Services** (loans, investments, insurance),
- **Non-profits & NGOs** (fundraising, FCRA requests),
- **Event Industry** (sponsorships),
- **Corporate B2B Sales**,
- **Healthcare** (insurance),
- **Education** (admissions & partnerships).

## 6. Technical Implementation
- **Frontend:** Built using **HTML, CSS, and JavaScript** to provide a responsive and interactive web-based dashboard. The interface displays live transcription, AI recommendations, and structured call summaries in real time.
- **Backend:** Powered by **FastAPI / Flask (Python)** for handling API requests and orchestrating communication between modules. The backend manages transcription, sentiment analysis, LLM integration, and database operations.
- **Speech-to-Text Module:** Utilizes **SpeechRecognition** library or **Google Speech-to-Text API** to convert live audio (captured via Virtual Audio Cable) into text with high accuracy.
- **NLP & AI Models:** Integrates **GROQ LLaMA models** or **Hugging Face Transformers** for natural language processing, sentiment analysis, and generating negotiation strategies, recommended dialogues, and objection-handling responses.
- **Database: MongoDB Atlas (cloud-hosted)** stores customer profiles, past call logs, generated summaries, and personalized insights, enabling contextual memory for future interactions.
- **Deployment:**
  - o **Frontend** hosted on **Vercel** for fast, scalable delivery.
  - o **Backend** deployed on **Render / Heroku** for easy cloud-based API hosting.
  - o **Database** hosted on **MongoDB Atlas**, ensuring secure and scalable storage.

# 7.Architecture Diagram
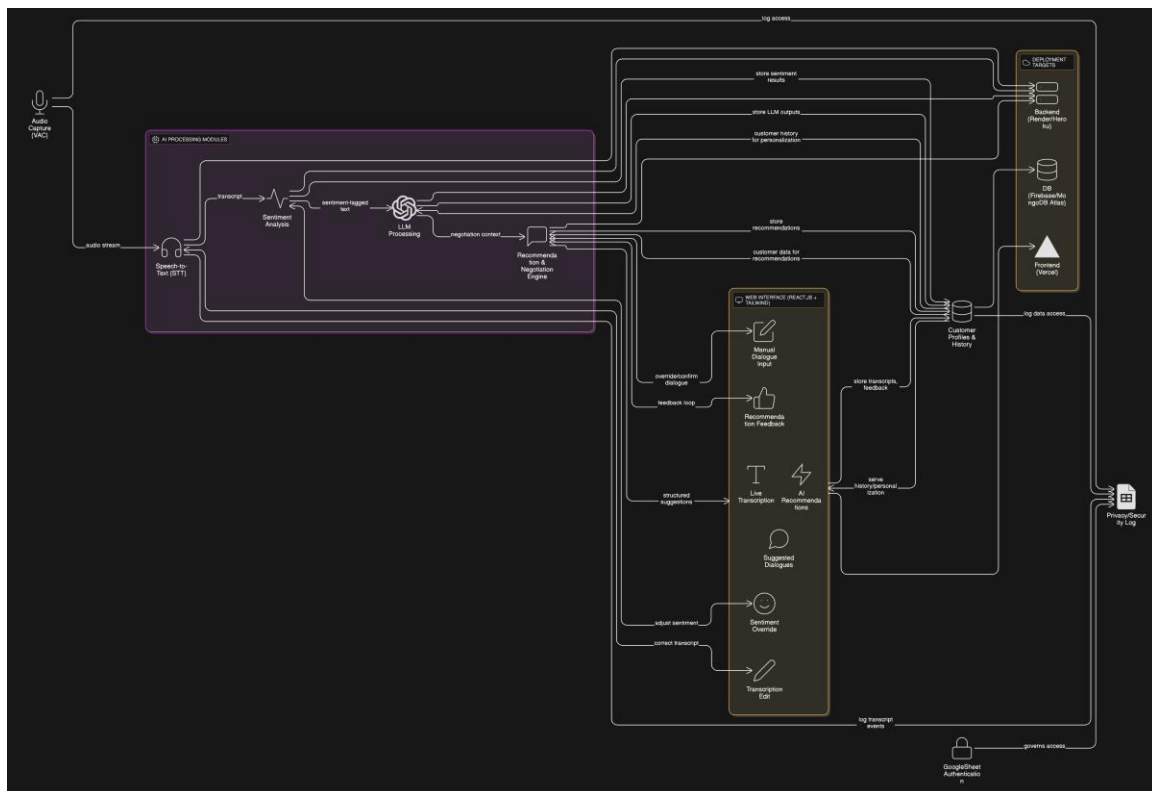


# 8. Impact & Benefits

- **Enhanced Access & Inclusion:** By providing real-time guidance, even less-experienced professionals can negotiate effectively, reducing inequality in opportunities.
- **Strengthened Trust & Transparency:** Automatic transcription and structured summaries ensure that conversations are clear, accountable, and free from misinterpretation.
- **Empowering Human Connections:** Personalized recommendations and objection-handling strategies allow for more empathetic, people-centric interactions.
- **Capacity Building:** Acts as a continuous learning assistant, upskilling sales teams, NGO workers, financial advisors, and others through live coaching.
- **Scalable Social Good:** Beyond businesses, the system benefits NGOs, educational institutions, and healthcare providers,helping them secure funding, negotiate sponsorships, and serve communities better.

# 9. Future Enhancements

- **Multi-Language Support:** Expand speech recognition and AI recommendations to multiple languages, enabling global teams to use the assistant seamlessly.
- **Advanced Sentiment & Emotion Analysis:** Detect not just sentiment but also emotional tone (confidence, hesitation, urgency) to provide even more precise negotiation strategies.
- **CRM Integrations:** Connect with popular CRMs like **Salesforce, HubSpot, and Zoho** to ensure customer profiles, summaries, and action items sync directly into existing workflows.
- **Analytics Dashboard:** Provide sales managers and organizations with an interactive dashboard to track negotiation performance, deal progress, conversion rates, and overall ROI.
- **Voice Coaching Mode:** Use AI to simulate mock negotiations and train new team members with live feedback, making it a continuous learning tool.

## 10. Team Contribution Plan

Each team member will clone the repository locally , create their own feature branch (Frontend, Backend, AI, or Deployment), and contribute code independently. Work will be continuously pushed to GitHub, where branches will be reviewed and merged into the main branch after validation. This approach ensures:

- Smooth collaboration without conflicts.
- Clear ownership of different components.
- Faster integration and debugging.
- A reliable final build ready for deployment and presentation.

## 11.Conclusion

The **AI-Powered Real-Time Recommendations and Negotiation Assistant** is more than just a sales tool, it is a **universal negotiation co-pilot** designed to empower professionals across industries. By combining **real-time transcription, sentiment analysis, and intelligent recommendations**, it bridges the gap between human communication and data-driven decision making. This solution not only accelerates deal closures and enhances customer trust but also democratizes access to **smart negotiation strategies**, enabling NGOs, financial advisors, event managers, and educators to engage more effectively with their stakeholders. In a world where every conversation can shape outcomes, our assistant transforms ordinary discussions into **opportunities for impact, collaboration, and growth**. It is **scalable, socially relevant, and future-ready**, true innovation that can redefine how people negotiate, connect, and succeed.