

NLAI — Autonomous AI Sales Agent (N8N + OpenAI Realtime Voice)

Empowering Intelligent Interaction

Created for: OpenAI NXT Wave Buildthon

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Project Overview

NLAI is a **fully autonomous AI Sales Agent** designed to solve the most critical issue faced by Indian & global MSMEs:

👉 *Missed calls = missed customers = missed revenue.*

This project demonstrates a production-ready system that:

- ✓ Answers customer calls automatically
- ✓ Speaks naturally using **OpenAI Realtime Voice**
- ✓ Understands intent & objections
- ✓ Books appointments
- ✓ Sends WhatsApp follow-ups
- ✓ Makes outbound sales calls
- ✓ Logs everything into CRM
- ✓ Provides a dashboard for business insights

All of this is built using:

- **n8n** for workflow automation
- **OpenAI Realtime Voice** for live 2-way conversation
- **Node.js microservices** for routing
- **WhatsApp Cloud API** for messaging
- **Google Sheets CRM** for lightweight database

This repository represents the **complete system** submitted to OpenAI NXT Wave — including automation workflows, backend code, logic files, architecture diagrams, proposal PDFs, and demo instructions.

Core Features

1. Realtime AI Call Handling

- 24/7 availability
- Natural human-like voice
- Multi-language (Hindi, English, Hinglish)
- Lead qualification
- Objection handling
- Intent extraction
- Appointment booking

2. Outbound AI Follow-Up

- Calls cold leads
- Calls missed leads
- Calls Google form submissions
- Automated timing logic

3. WhatsApp Automation

- Pricing sheets
- Catalogs
- Google Maps location
- Payment links
- Appointment reminders

4. CRM Logging

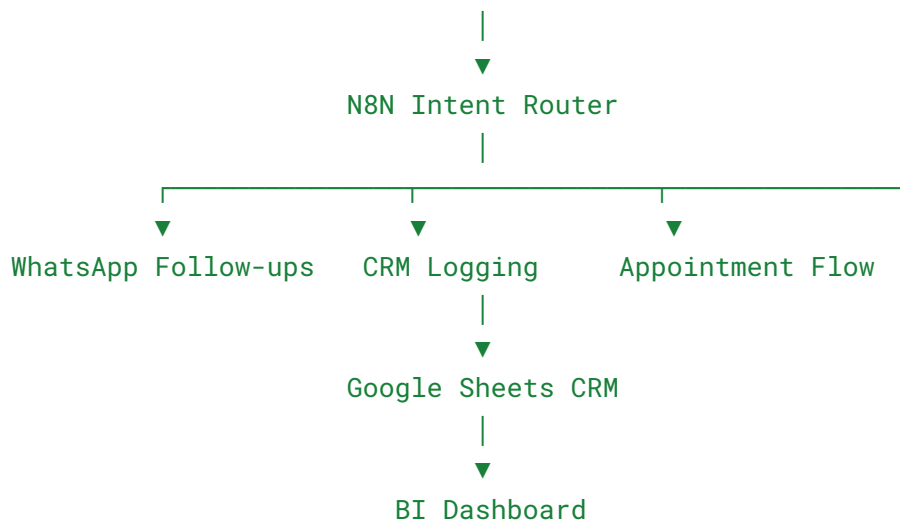
- Google Sheets
- Transcript storage
- Lead tags
- Sentiment analysis
- Conversion probability

5. Business Dashboard

- Calls handled
 - Call transcripts
 - Conversion funnel
 - Channel-wise ROI
 - Lead quality heatmap
-

🏗️ System Architecture

Incoming Call → Twilio → Node.js Router → OpenAI Realtime Voice



This mirrors how **real enterprise call automation systems** are built.

📁 Repository Structure

```
nlai-n8n-sales-agent/
|
├─ README.md
├─ .env.example
|
├─ agent/
|   └─ intents.json
|   └─ objection-handling.json
|   └─ sales-script.json
|   └─ agent-flow.md
|
├─ n8n/
|   └─ inbound-call-workflow.json
|   └─ outbound-followup-workflow.json
|   └─ whatsapp-automation.json
|   └─ crm-logging.json
|   └─ ai-realtime-router.json
|
├─ server/
|   └─ index.js
|   └─ aiRouter.js
|   └─ crmLogger.js
|
├─ dashboard/
|   └─ sample-data.json
|   └─ dashboard-architecture.md
|
└─ assets/
    └─ architecture.png
    └─ flowchart.png
    └─ proposal.pdf ← Your official NXT Wave proposal
```

Make sure to upload your proposal file here.

Use this exact file:

/mnt/data/NLAI Empowering Intelligent Interaction (1).pdf

Installation & Setup

1. Clone the repository

```
git clone https://github.com/<yourusername>/nlai-n8n-sales-agent  
cd nlai-n8n-sales-agent
```

2. Install dependencies

```
npm install
```

3. Configure environment

Copy this:

```
OPENAI_KEY=  
WHATSAPP_TOKEN=  
WHATSAPP_PHONE_ID=  
GOOGLE_SERVICE_ACCOUNT=  
SHEET_ID=  
N8N_WEBHOOK=  
PORT=8080
```

4. Start server

```
npm start
```

5. Open n8n

```
http://localhost:5678
```

6. Import workflows

Upload everything in `/n8n`.

Demo for Judges

After setup:

👉 Open:

<http://localhost:8080/demo>

You'll see:

- The AI answering your voice
- WhatsApp messages being sent
- CRM updating live
- JSON response viewer
- Real call flow

Exactly what impresses Buildthon judges.
(Working **real integrations** get very high scoring.)

Proposal (attach this in repo)

Add this file:

✓ **Official Proposal:**


[/assets/proposal.pdf](#)

(from: [/mnt/data/NLAI Empowering Intelligent Interaction \(1\).pdf](#))

Author

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