Twilio + ChatGPT + WhatsApp AI Automation

1. Overview

This document provides clear and simple requirements to build an AI automation system using Twilio, ChatGPT (OpenAI API), and WhatsApp integration. The system handles three core functions: Text Messaging (SMS), Phone Calls, and WhatsApp chat automation.

2. Technical Requirements

- Twilio Account (with verified phone number and WhatsApp access).
- OpenAI API Key (for ChatGPT integration).
- Render or Railway account (for hosting backend).
- Node.js + Express setup in Cursor IDE.
- Google Sheet or CRM (optional) to store leads.

3. Phone Call Configuration (Twilio Voice)

- Buy a Twilio phone number with voice capability.
- Create a webhook endpoint '/voice' in Node.js using Express.
- Use Twilio VoiceResponse() to handle incoming calls.
- Play a greeting message (Text-to-Speech).
- Record or transcribe caller's speech.
- Send transcription text to OpenAI API for smart reply.
- Send reply text back to Twilio as speech (TTS).
- Optionally save call log and transcription to Google Sheet or CRM.

4. SMS Text Messaging Configuration

- Buy or use an existing Twilio number with SMS capability.
- Set SMS webhook to '/sms' in your backend.
- When a text arrives, receive message body (req.body.Body).
- Forward that message to OpenAI API for intelligent reply generation.
- Send the AI's response back to user using Twilio's MessagingResponse().
- Log conversation or save contact details to a Google Sheet (optional).

5. WhatsApp Configuration (Twilio API for WhatsApp)

- Apply for WhatsApp Business access in Twilio (console).
- Use a WhatsApp-enabled Twilio number (sandbox available for testing).

- Create a webhook endpoint '/whatsapp' in Node.js backend.
- Receive incoming messages via req.body.Body.
- Send user message to OpenAI API (ChatGPT) for context-based replies.
- Respond using Twilio API with a polite, natural reply.
- Capture details like Name, Email, and Phone number.
- Optionally integrate Google Sheets or CRM for storing leads.

6. Hosting on Render

- Push your project to GitHub from Cursor.
- Login to Render.com and create a new Web Service.
- Connect your GitHub repo and choose Node environment.
- Add environment variables (Twilio SID, Auth Token, OpenAI Key).
- Deploy and get your public URL (e.g., https://yourbot.onrender.com).
- Paste this URL into Twilio webhook settings for Voice, SMS, and WhatsApp.

7. Summary

Once configured, this system allows your Twilio number to automatically handle phone calls, SMS messages, and WhatsApp chats through AI. The setup runs 24/7 on Render, providing a full autopilot assistant for your real estate business.