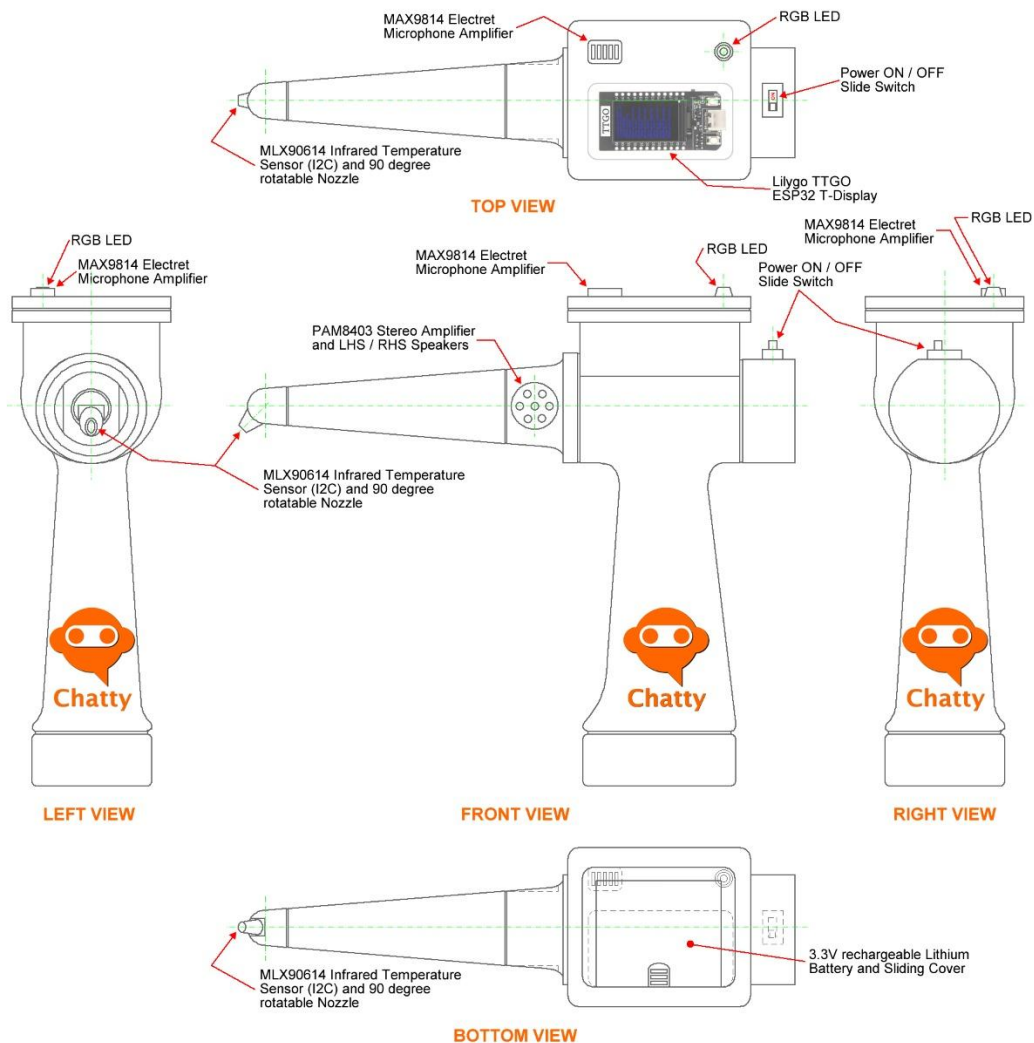




# Your **AI** Meat Cooking **Assistant**

## Introducing Chatty AI Meat Cooking Assistant – The AI Meat Cooking Assistant That Talks to You!

Are you tired of overcooking your sirloin? Or maybe you are constantly second-guessing when to flip that perfect T-Bone? Meet **Chatty AI Meat Cooking Assistant**, (or **Chatty** for short), your new best friend in the kitchen (or out by the grill). Powered by artificial intelligence, **Chatty** is a voice-interactive, temperature-sensing, smart AI cooking assistant that makes sure every piece of meat you cook comes out juicy, tender, and perfectly done - every single time.



## What is your Chatty AI Meat Cooking Assistant?

**Chatty** is a clever little device built using a Lilygo TTGO ESP32 T-Display with a colourful TFT display, a high-precision contactless MLX90614 infrared temperature sensor (2IC), an RGB LED and Passive Buzzer for real-time feedback, a microphone to allow you to ask **Chatty** questions, left-hand side and right-hand side stereophonic speakers to talk to you with friendly voice alerts and ChatGPT-4.0 responses to your questions. It connects to Wi-Fi, chats with ChatGPT-4.0 in the cloud, and gives you customised, intelligent cooking advice based on what you are cooking.

## How Does your Chatty AI Meat Cooking Assistant Work?

Using a contactless infrared temperature sensor, **Chatty** constantly monitors the surface temperature of your meat, whether it is steak, lamb, pork or veal. You can input what meat type you are cooking, the type of meat cut, how much it weighs, and how you want it cooked in the web page user interface, then click on the “Start Cooking” button, and **Chatty** takes care of the rest. **Chatty** uses AI smarts to track cooking progress and alerts you when it is time to flip your meat, or when your meat is perfectly cooked. **Chatty** also incorporates wake-word detection, so it knows when you are asking it a question. You can ask **Chatty** any question you like while you are cooking and **Chatty** stops monitoring your meat while answering your question. Just say “Hello **Chatty**, what is a great salad for me to make to eat with my meat?” or “Hello **Chatty**, what is the best wine to pair with my meat?”, etc., and **Chatty** will tell you it’s answer via its built-in stereophonic speakers!

## Chatty Features:

- **Voice-Activated:** Talk to **Chatty** and ask it any question you like while you are cooking your meat. Just start by saying “Hello **Chatty**” followed by your question and **Chatty** will know you are asking it a question that you want answered.
- **Accurate Temperature Monitoring:** The MLX90614 sensor displays real-time temperature readings on the Lilygo TTGO ESP32 T-Display’s colour display screen, so you know exactly what is going on throughout the entire cooking process.
- **ChatGPT-4.0 Powered AI Intelligence:** With ChatGPT-4.0 built in, **Chatty** understands your cooking style and gives you smart, conversational guidance.

- **Speaks to You: Chatty** does not just beep, it actually talks with warm, helpful advice. Chatty will tell you when it is time to flip your meat over and when your meat is perfectly cooked. It is like having a friendly Michelin chef by your side, cooking with you and answering any questions you may wish to ask.
- **LED & Buzzer Alerts: Chatty** gives you visual and audio feedback in real-time, flashing it's RGB LED yellow and beeping it's Passive Buzzer when it is time to flip your meat, flashing it's RGB LED red and beeping it's Passive Buzzer when the meat is done cooking, flashing it's RGB LED green when ChatGPT-4.0 is thinking how to answer your questions, and flashing it's RGB LED blue when ChatGPT-4.0 is answering your questions!
- **Web UI:** You can easily use Chatty's web interface from your phone or laptop to input your meat cooking preferences before starting the meat cooking monitoring! Your questions and ChatGPT-4.0's responses will also be displayed on the web interface.

### Why You will Love Chatty:

- **Perfect Results, Every Time:** Whether you are searing a steak or slow-cooking ribs, **Chatty** helps you nail it every time.
- **Beginner-Friendly:** No more Googling "how long to fry my sirloin." Just use Chatty and leave the whole cooking process in your smart AI Meat Cooking Assistant's hands.
- **Grill Masters Approved:** Even pros love having **Chatty** around for multitasking and precision.
- **Fun and Interactive:** It is like having your own Michelin star smart sous-chef that never gets tired or distracted.

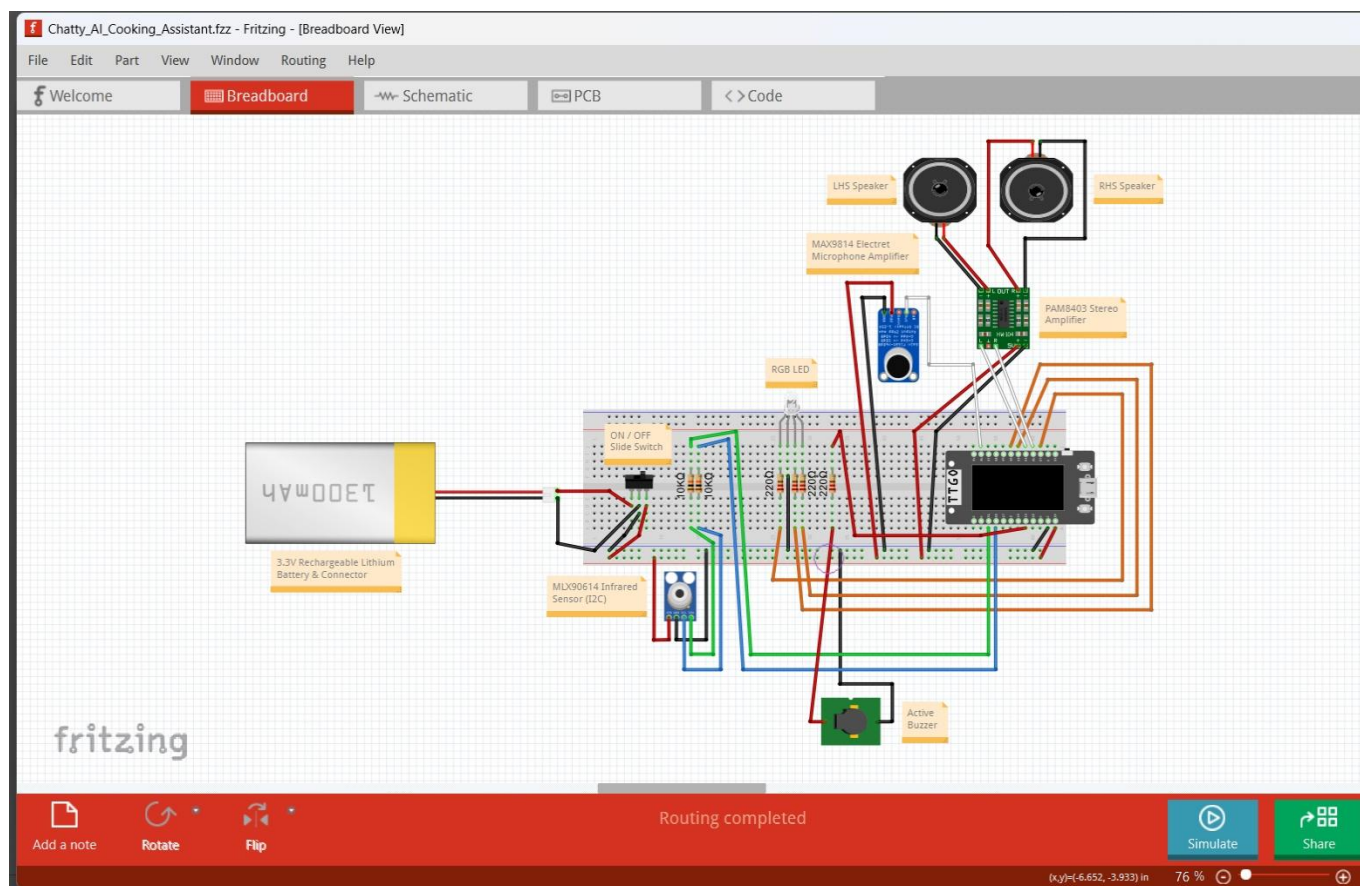
### Great for Gifting!

- ❖ Know someone who loves cooking or just got a new BBQ? **Chatty** is the perfect gift for Christmas, Father's Day, Mother's Day, birthdays, or the BBQ season!
- ❖ Say goodbye to burnt rump and dry sirloin. Say hello to juicy, flavourful, perfectly cooked meat, every time.
- ❖ Just say "Hello **Chatty**," and let the magic begin.
- ❖ Get yours now and get some sizzle back in your cooking!

## Hardware Used:

- 3.7V rechargeable LitiumBattery
- Power ON/OFF Slide Switch
- Lilygo TTGO ESP32 T-Display microcontroller
- MLX90614 Contactless Infrared Temperature Sensor (I2C)
- RGB LED (to flash Yellow when the meat is ready to be flipped, to flash Red when the meat cooking is complete, to flash Green when ChatGPT-4.0 is thinking about your questions, and to flash Blue when ChatGPT-4.0 is answering your questions.)
- Passive Buzzer to buzz when the meat needs to be flipped or when the meat cooking process is complete.
- MAX9814 Electret Microphone Amplifier (to listen for user questions using wake-word technology.)
- PAM8403 Stereo Amplifier, and LHS and RHS Stereophonic Speakers (to inform the user via voice output when the meat needs to be flipped, when cooking is complete or to answer any user questions.)

## Wiring Diagram (Spritzing Diagram):



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Product conceptualisation, design and code development by Nicholas Williamson

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