

# COMFORT SENSE

baby bed





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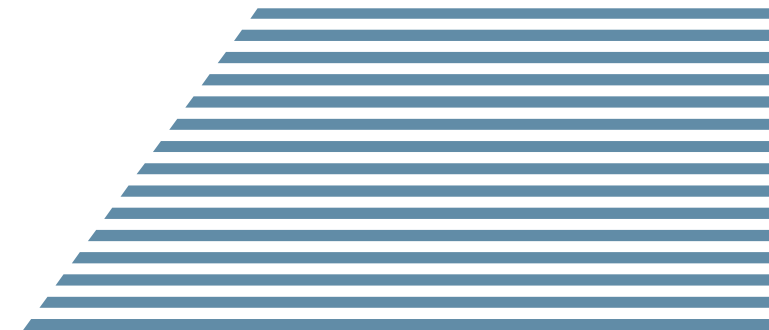
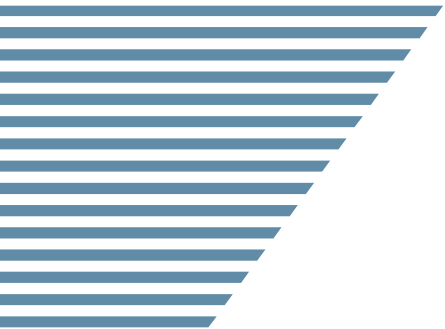
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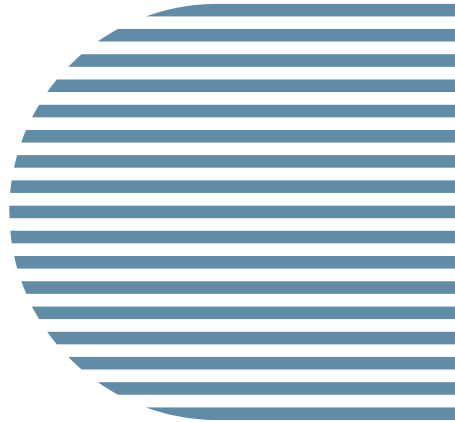
FUTURE WORK



# PROBLEM



Many mothers worry about their babies, fearing potential accidents or harm, even during sleep. This anxiety also encompasses concerns about external factors jeopardizing their baby's safety.

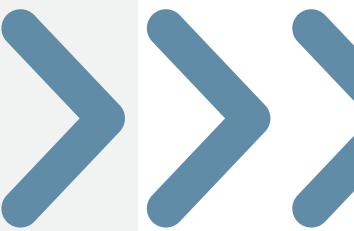




# SOLUTION



**The ComfortSense Baby Bed is a smart crib that detects the baby's environment, ensures their comfort, and allows mothers to monitor their baby's well-being.**





# FEATURES



## **BABY TEMP**

Baby temperature sensing with LCD display and app alerts if it goes above 37°C.

## **ROOM TEMP**

LCD displays baby and room temperature with humidity. App alerts for room temp over 30°C.

## **FAN SYSTEM**

Fan system responds to room temperature. It turns on automatically if baby's room exceeds 30°C.





# FEATURES



## **BABY MOVING**

When the baby moves, the app will display that to inform the mother.

## **LIVE MONITORING**

Mothers can activate live streaming with a provided camera to monitor their baby's movements in real-time.

## **SUNSHADE SYSTEM**

The canopy will close automatically if the sun's rays become directly to baby





# FEATURES



## **BABY DIAPERS**

If the baby's diaper needs changing, it will be shown to the mother on the app

## **BABY CRY**

If the baby is crying, the app will send a notification to the mom, and the toy will start running

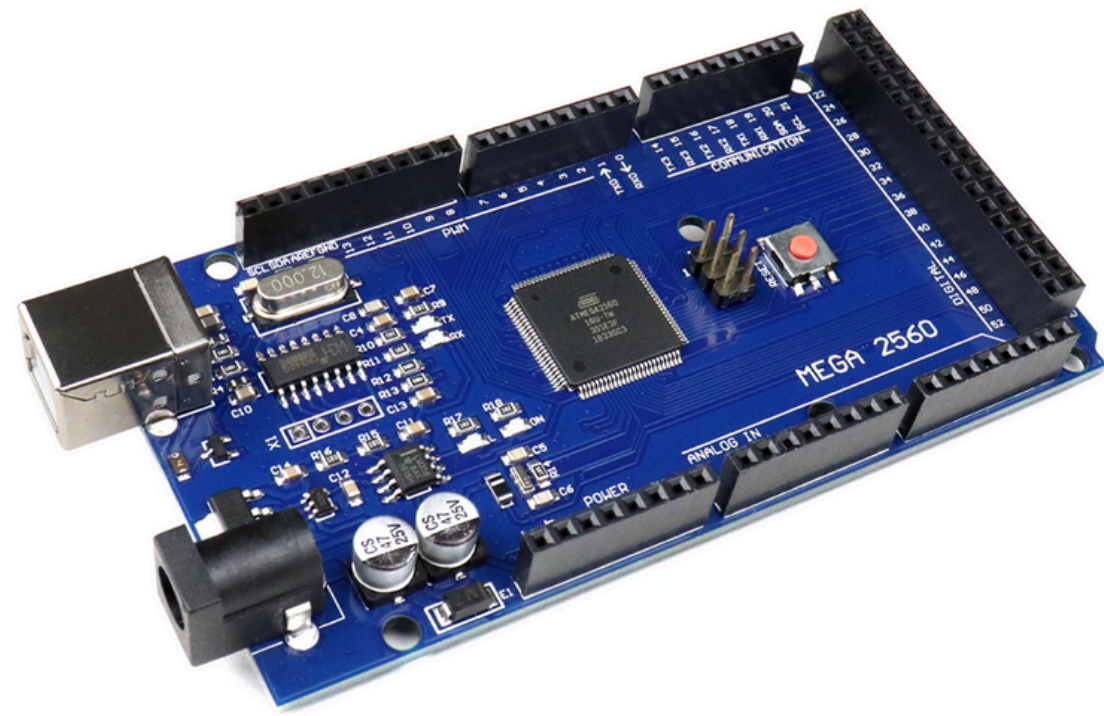
## **APPELICATION**

The app will show past incidents and enable remote crib rocking and toy activation

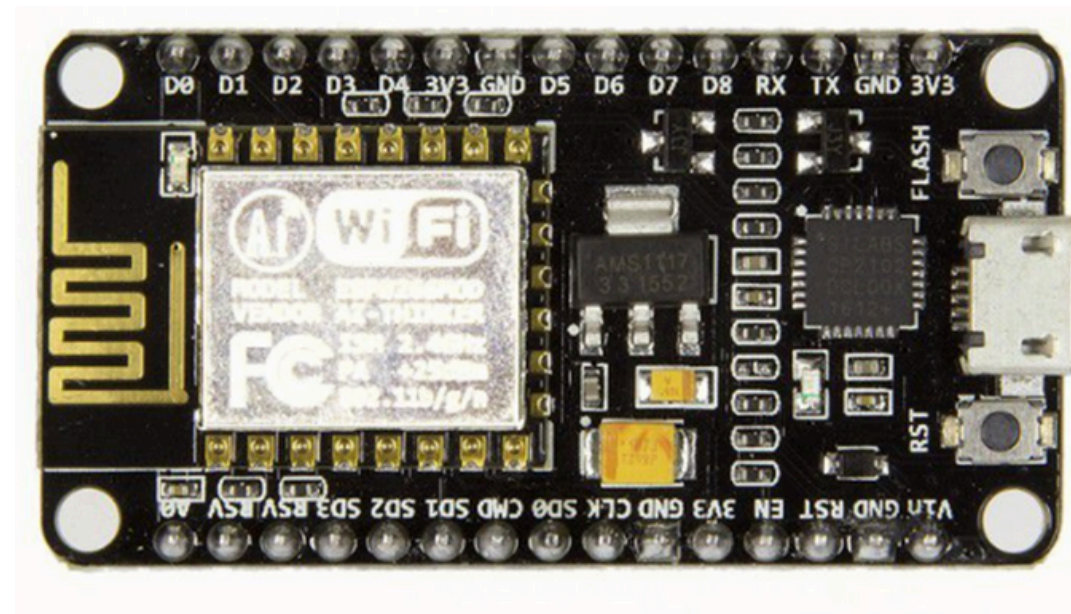




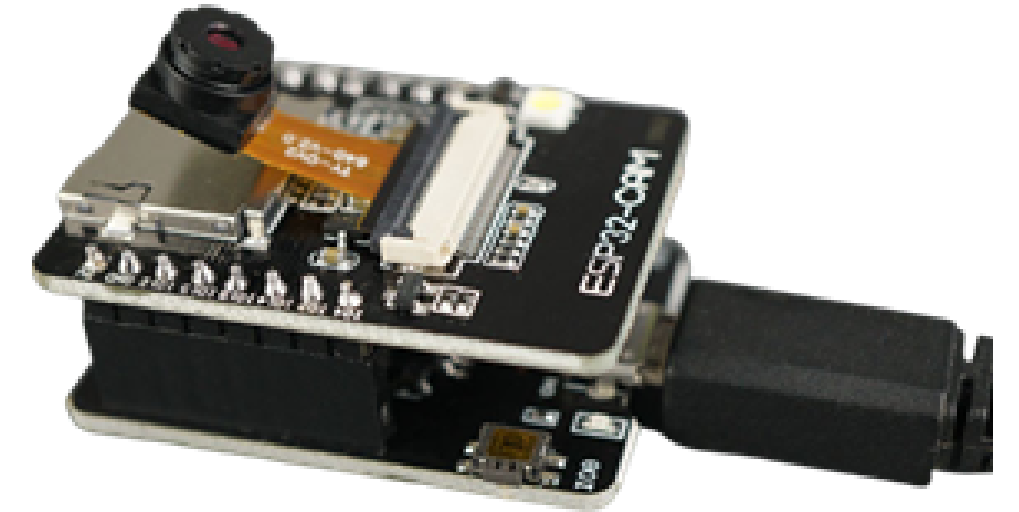
# HARDWARE MODULES



**ARDUINO MEGA.**



**EDP8266  
NODEMCU**

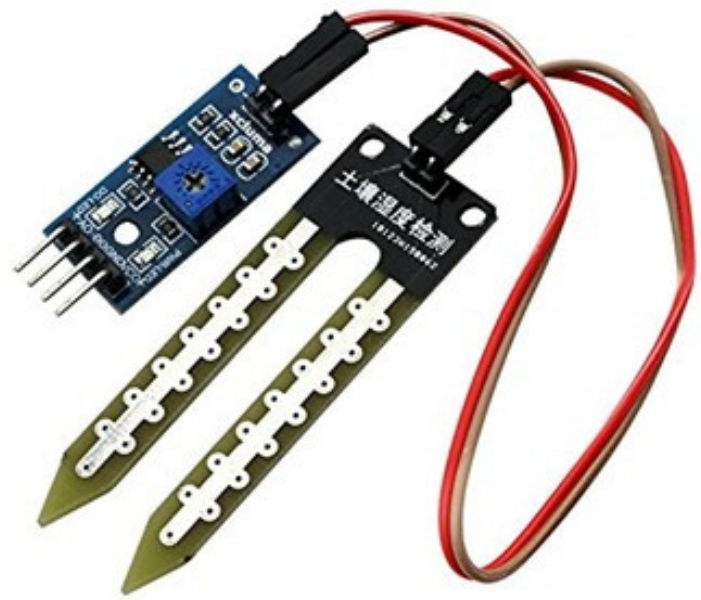


**ESP32-CAM.**

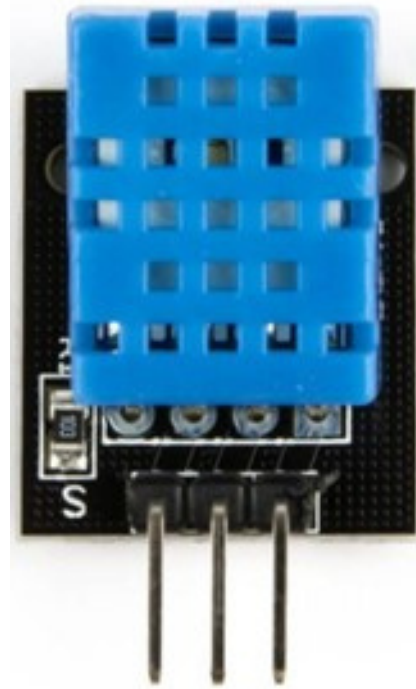




# HARDWARE MODULES



**MOISTURE SENSOR**



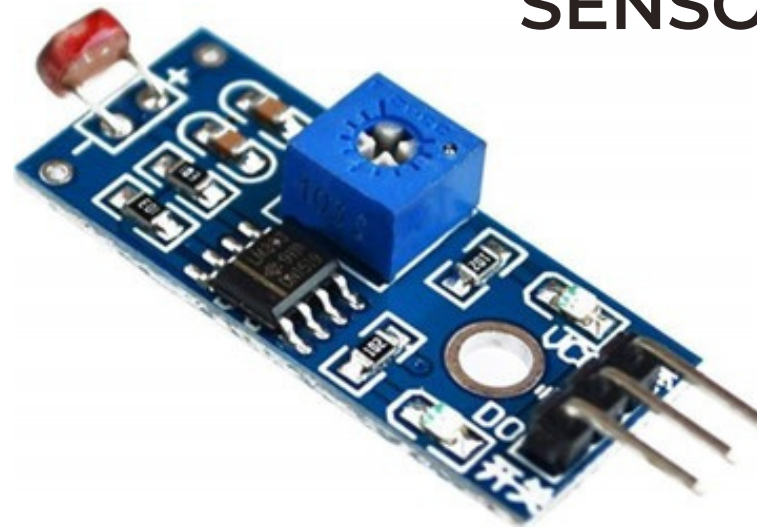
**DHT11  
TEMPERATURE  
SENSOR.**



**PIR SENSOR**



**103  
TEMPERATURE  
SENSOR**



**LDR SENSOR**



**SOUND SENSOR**





# HARDWARE MODULES



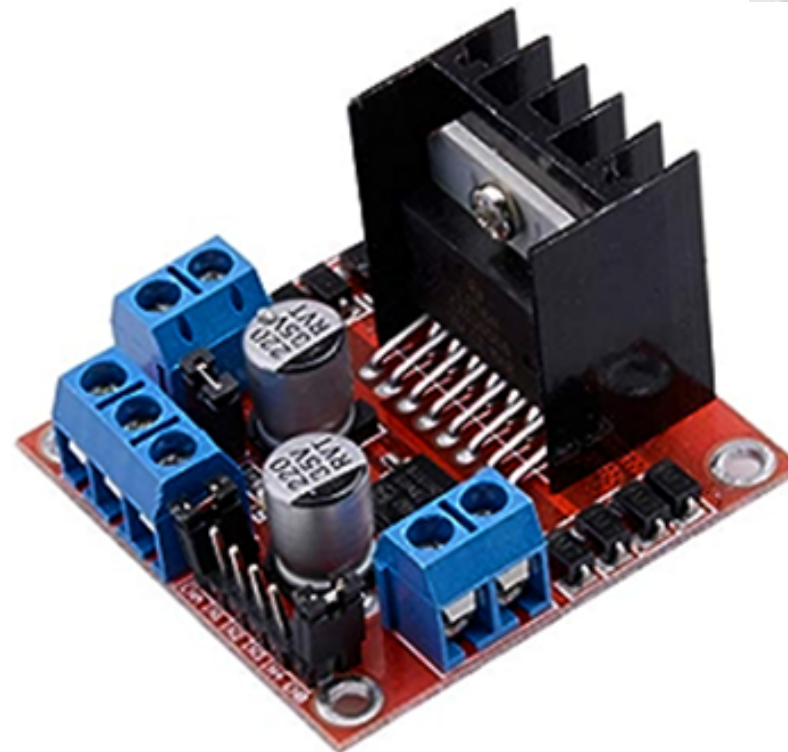
SERVO MOTOR



DC MOTOR



FAN



HBRIDGE

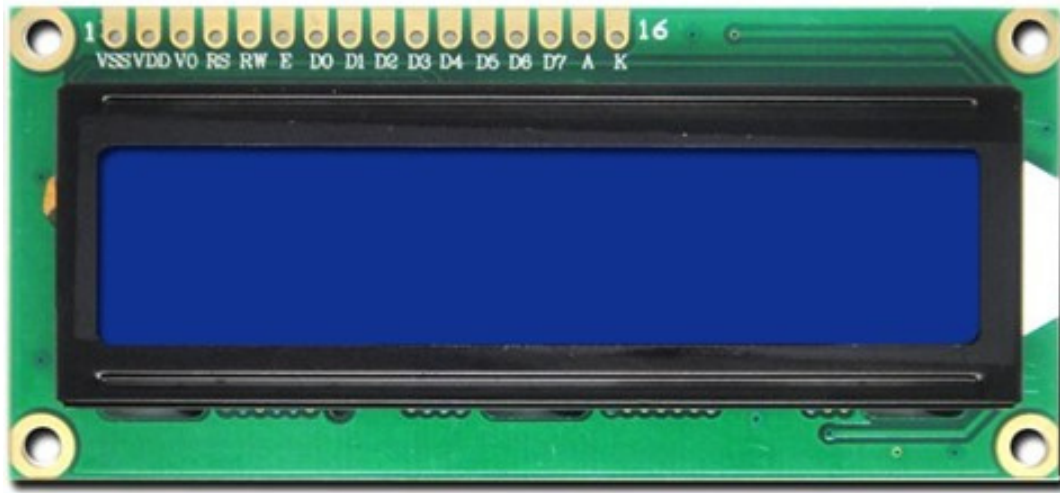


TOY

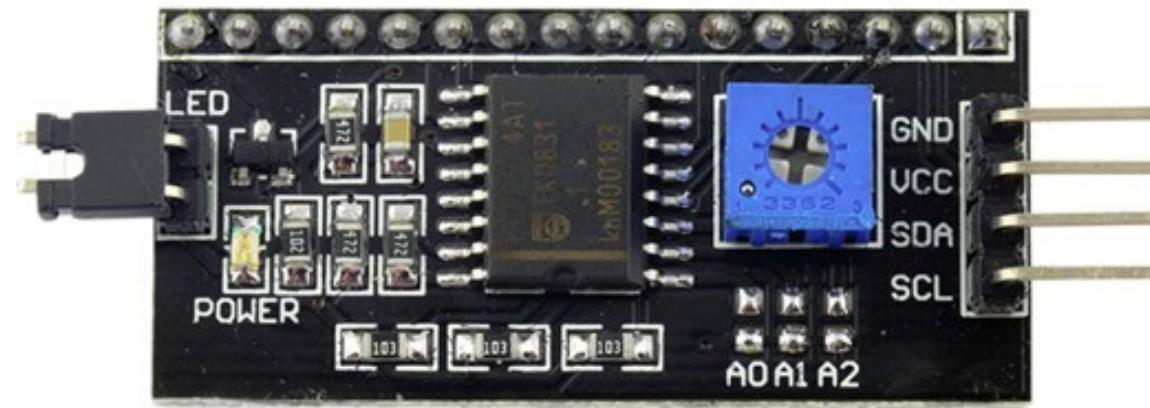




# HARDWARE MODULES



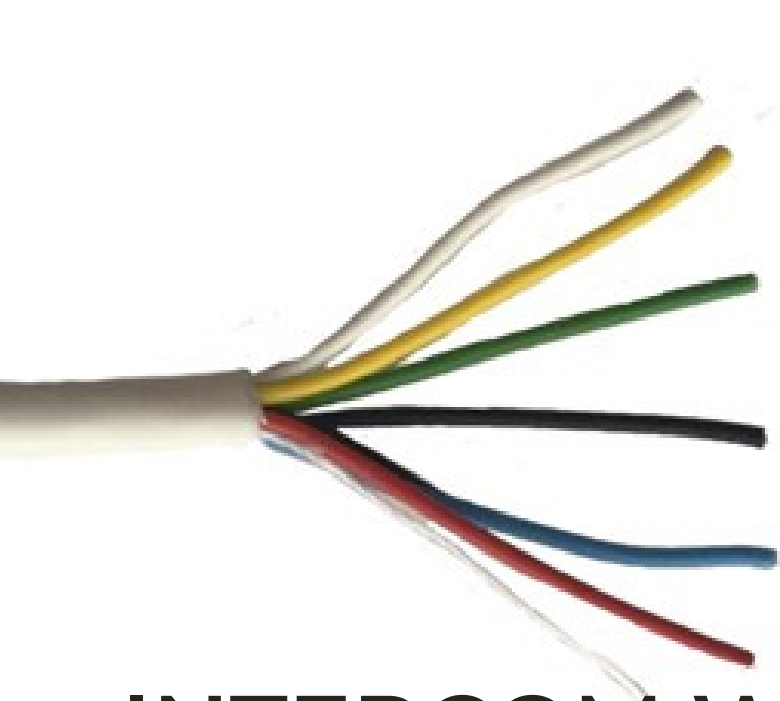
LCD



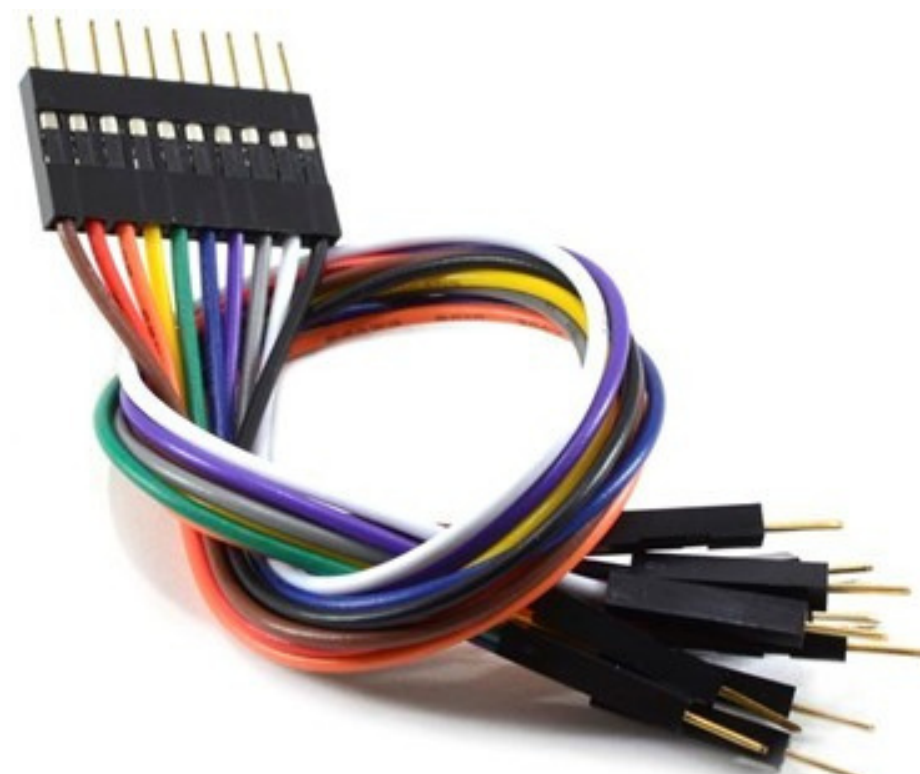
I2C



RELAY



INTERCOM WIRES.

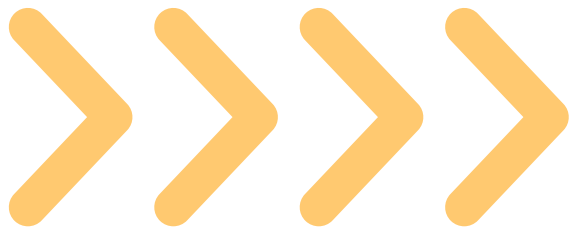


ARDUINO WIRES



VOLTAGE CONVERTERS



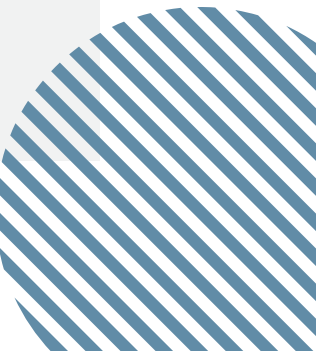


# CONSTRAINTS



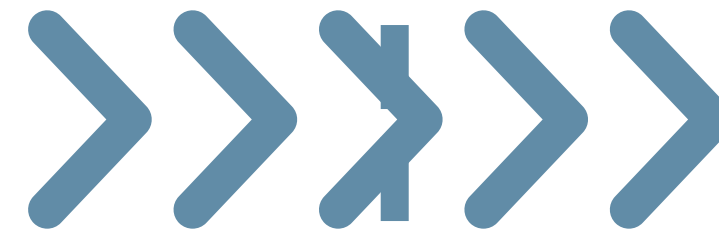
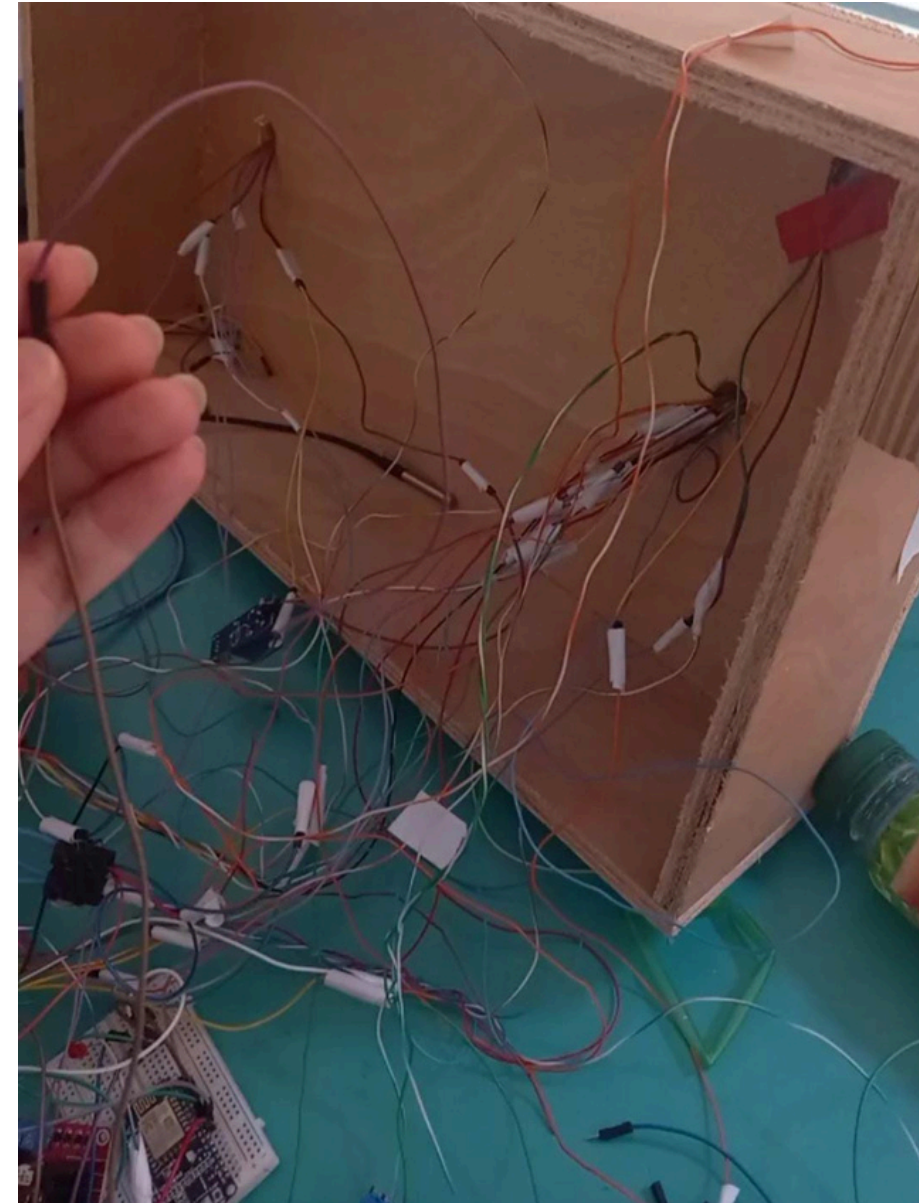
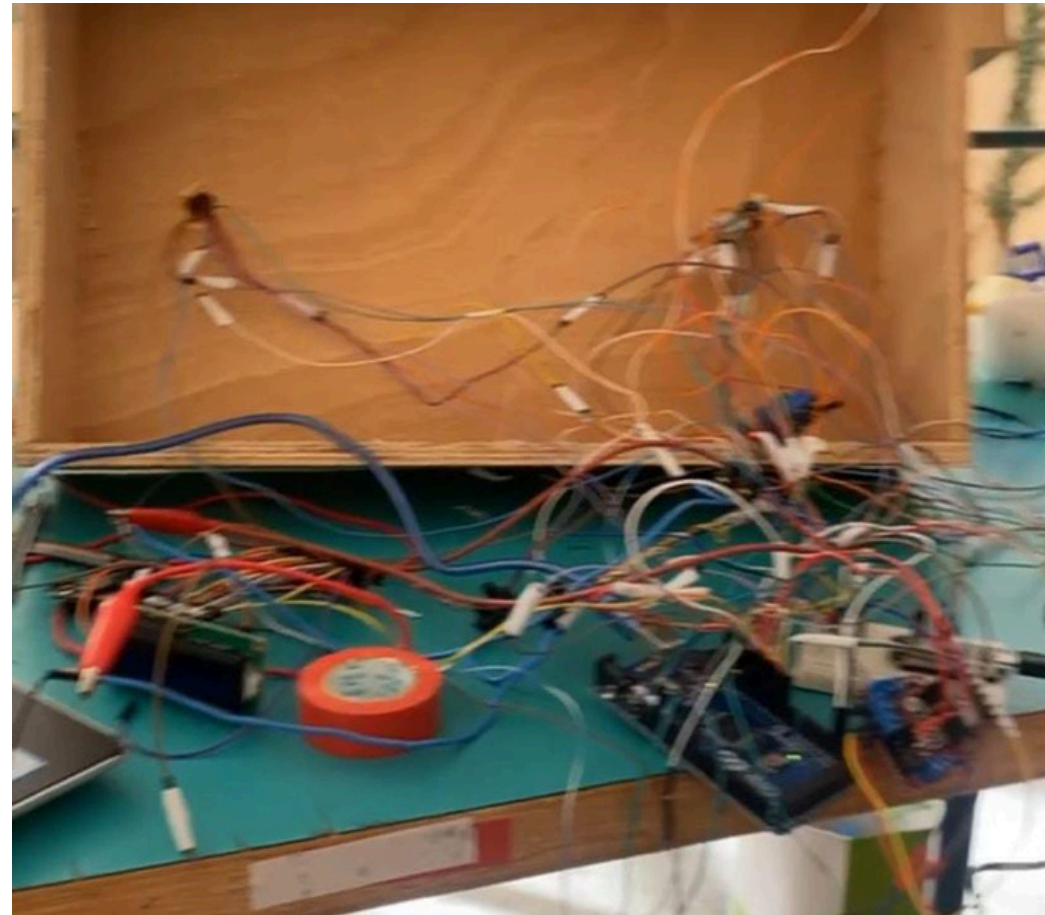
**We faced challenges related to sensor quality, notably microphone inaccuracies, and wiring issues leading to noise. These problems were partially resolved through a different wiring approach. Additionally, hardware components, including the ESP cam, exhibited intermittent failures, sometimes shutting down inexplicably.**

**In the next slide, we'll show you two images: one before and one after wired network implementation.**

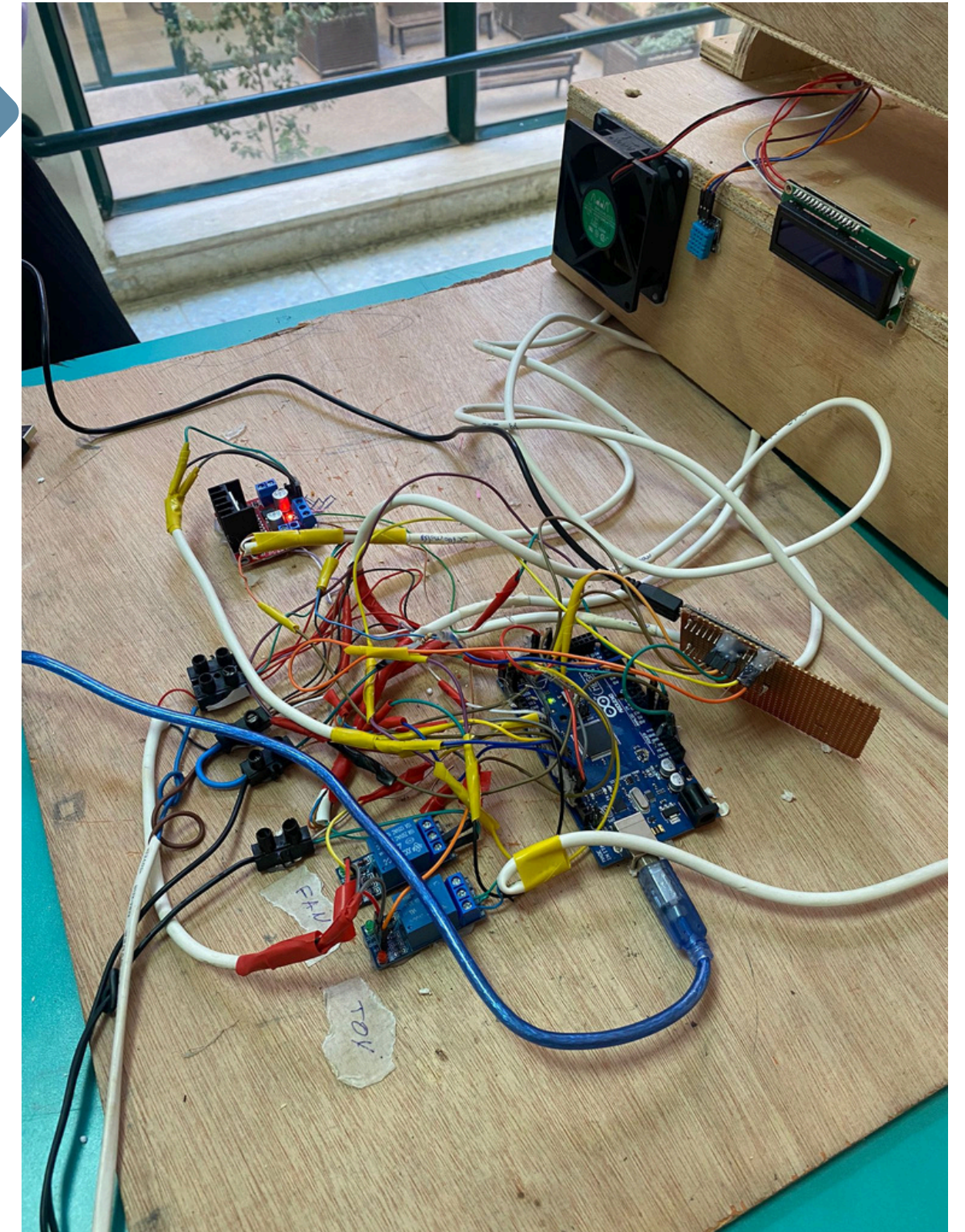




# BEFORE



# AFTER





# FUTURE WORK

🔍 **TWO WAYS TALKING SYSTEM**

🔍 **IMAGE PROCESSING TO KNOW BABY SITUATION FROM HIS FACE**





**Thank you**



lets go to live demo

