Artificial Intelligence? Detecting & Diverting my Cat

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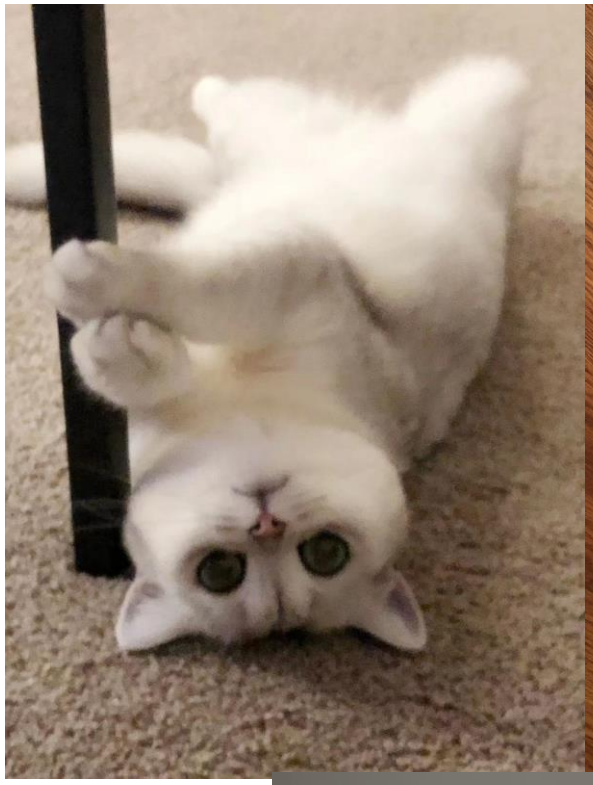
Motivation:

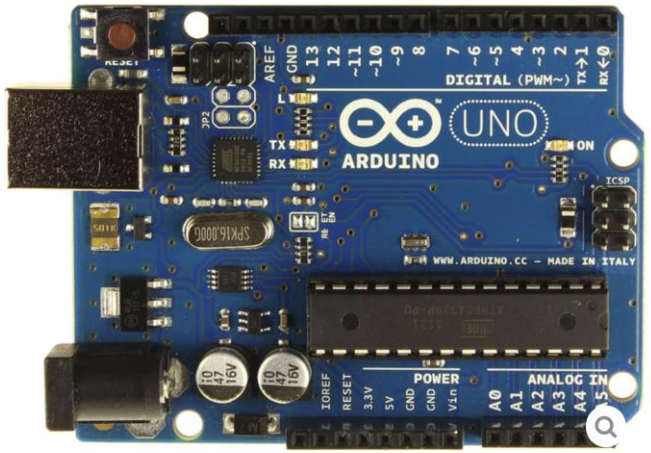
- Where is my cat?
- How can I prevent my cat from entering undesired places?



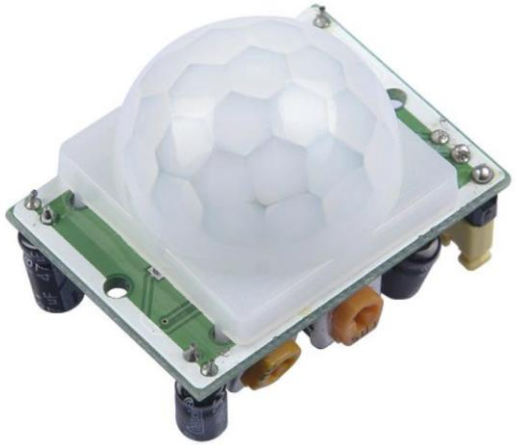
Challenges:

- How to detect a cat?
- How to distinguish a cat from other creatures (human, dog, etc.)?

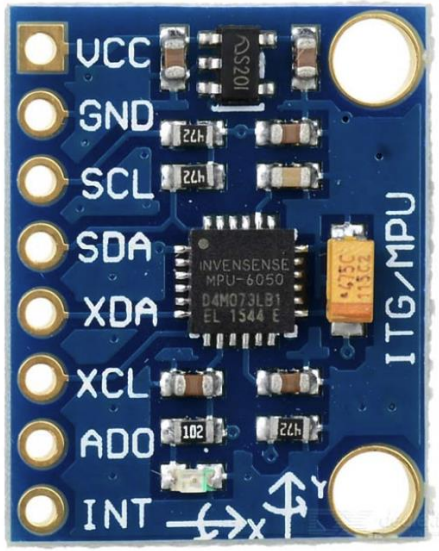
Key Components:



An extremely versatile mircrocontroller board



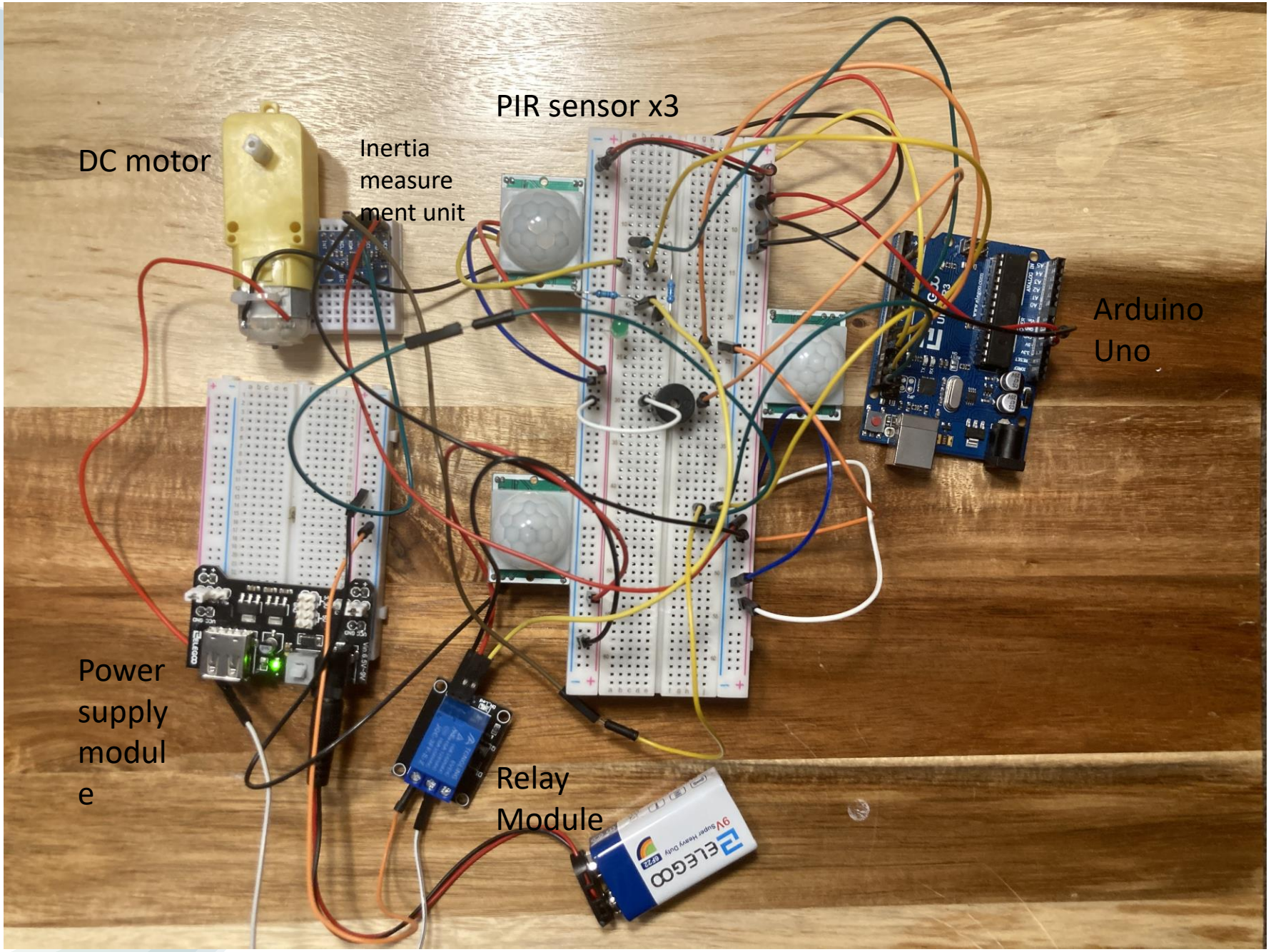
Passive Infrared Motion Sensor (PIR sensor) detect IR light radiation and moving object with heat.



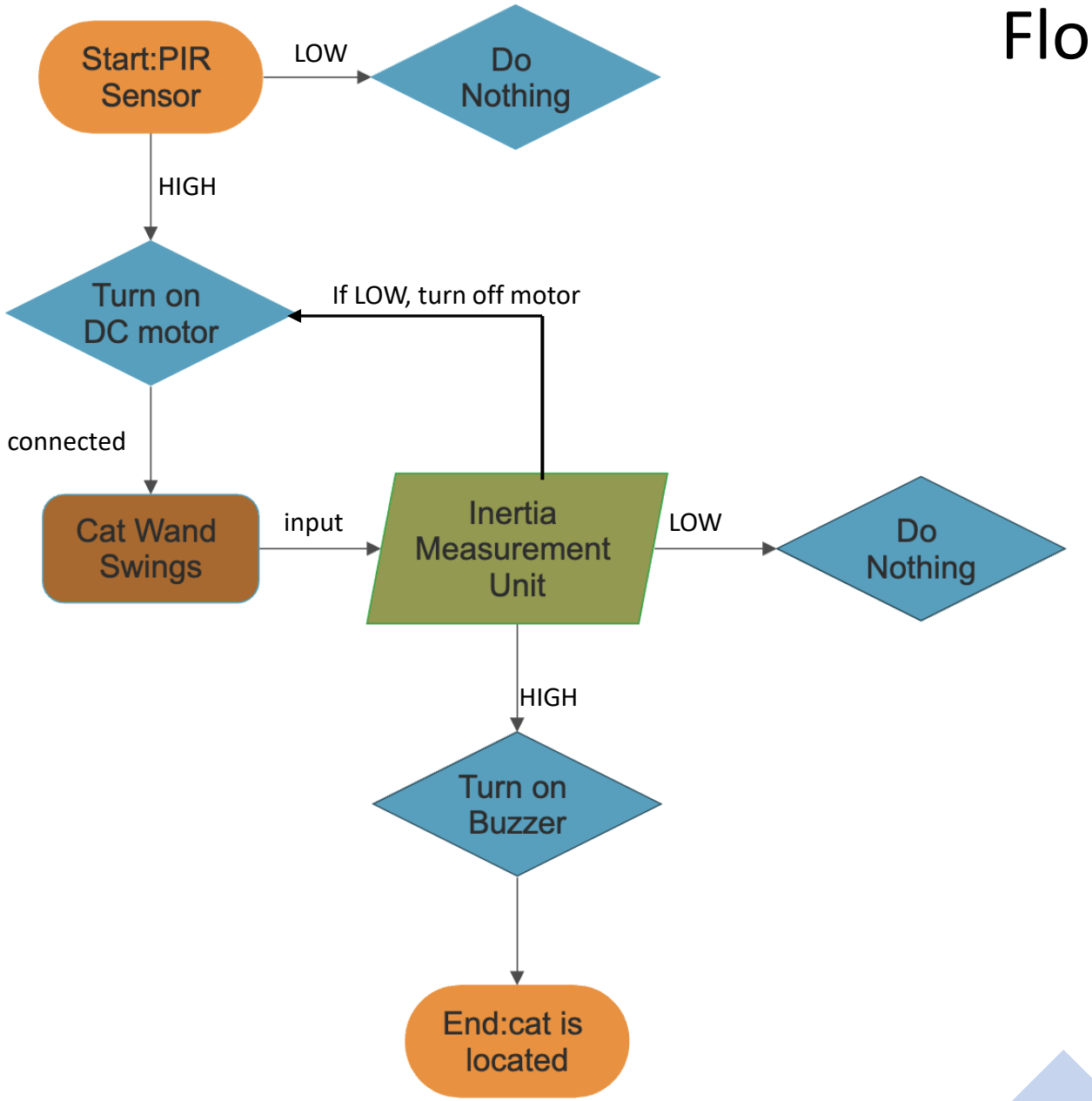
Inertia Measurement Unit is a Microelectromechanical system that measures mechanical perturbation

A cat wand is an interactive toys that is irresistible to in-door cats

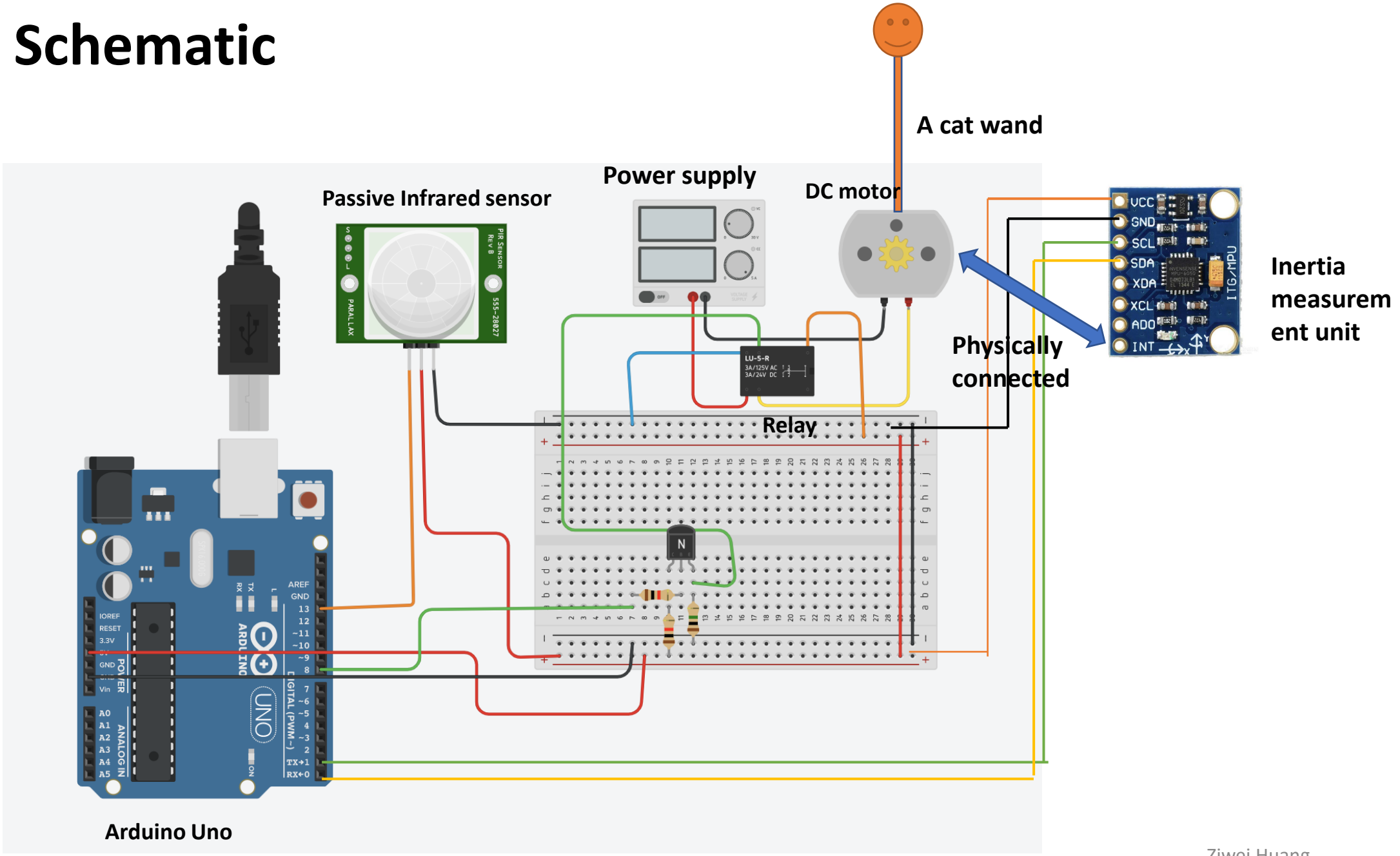
Product Overview



Flow Chart


Start:PIR Sensor
LOW
Do Nothing
HIGH
Turn on DC motor
If LOW, turn off motor
connected
Cat Wand Swings
input
Inertia Measurement Unit
LOW
Do Nothing
HIGH
Turn on Buzzer
End:cat is located

Schematic


A cat wand
Power supply
Passive Infrared sensor
DC motor
Inertia measurement unit
Physically connected
Relay
Arduino Uno
VCC
GND
SCL
SDA
XDA
XCL
ADO
INT
LU-5-R
3A/125V AC
3A/24V DC

Experiment Video (ideal version)

Experimental Video (reality)

Thank you for Watching