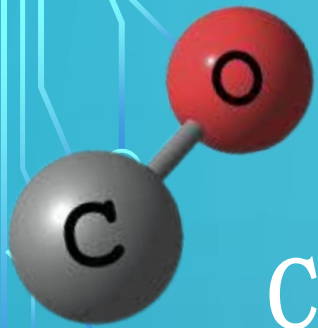




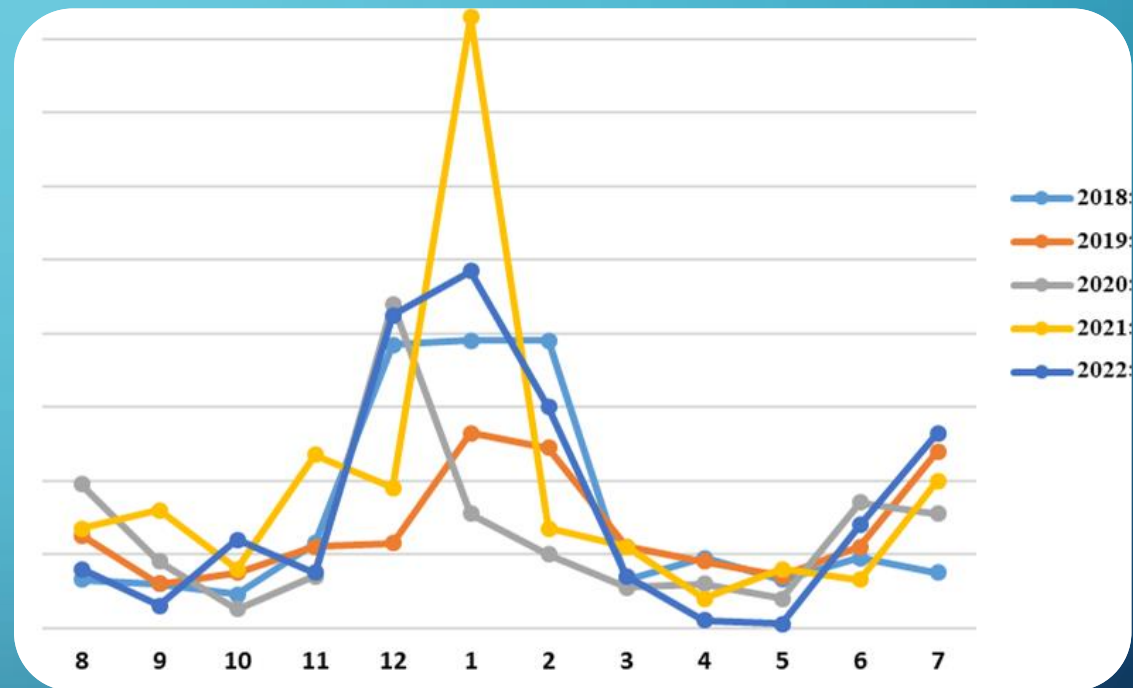
Stopping Monoxide Poisoning Bathroom System

Pui Ching Middle School, Macau
Ng U Wai , Chow I Hin



Chinese monoxide poisoning data

The incidence of carbon monoxide poisoning was the highest in 2021 and in 2019, the incidence was the lowest.



Central Unit monoxide poisoning causing 3 casualties

A building near Ban Zhung Tong was suspected to have a monoxide poisoning incident. A mother, child and her husband were found by a security officer, which called the police immediately. When the firefighters arrived, they found that all 3 people had no heartbeat and were transported to the hospital for emergency treatment, but unfortunately died.



Three people died of suspected carbon monoxide poisoning in a unit near Banzhao Hall



During the investigation, the doors and windows of the incident unit were opened.



1) Motivation for Project

When we shower, we may have monoxide poisoning, which we thought of many ways to stop, but eventually we came up with this way to solve the problem.

WHAT ARE THE SYMPTOMS OF CARBON MONOXIDE POISONING?



HEADACHE



DIZZINESS



NAUSEA



BREATHLESSNESS



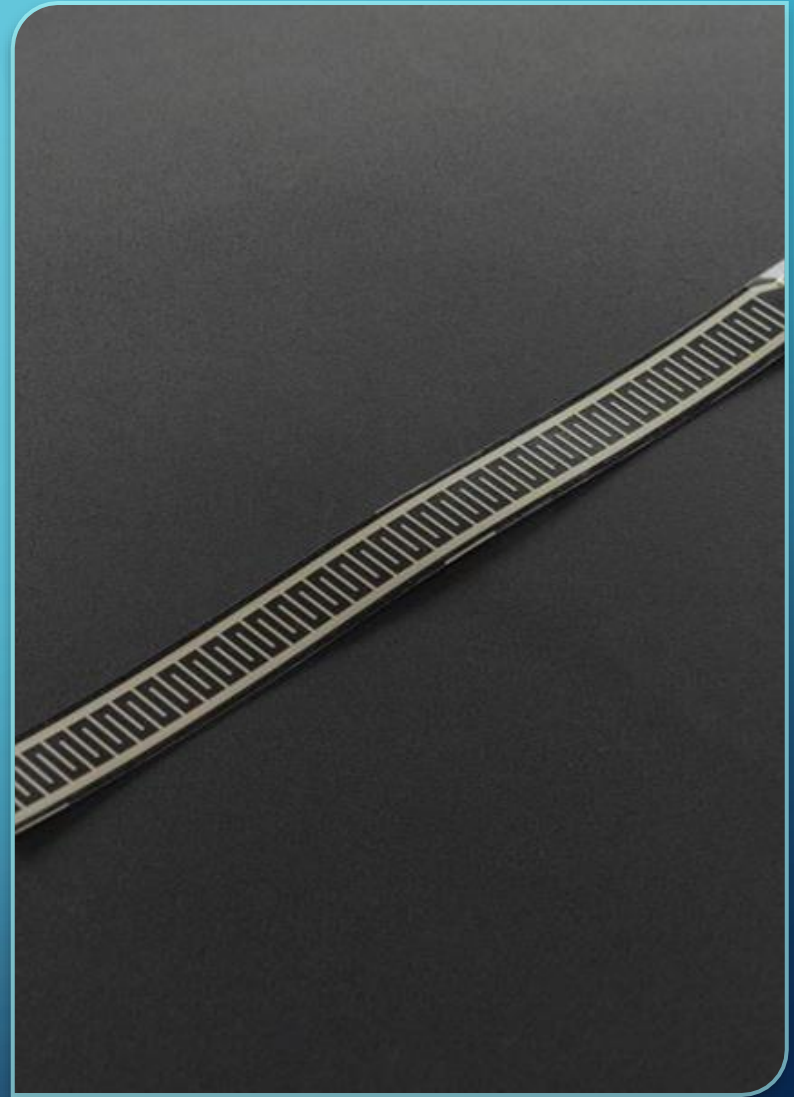
COLLAPSE



LOSS OF CONSCIOUSNESS

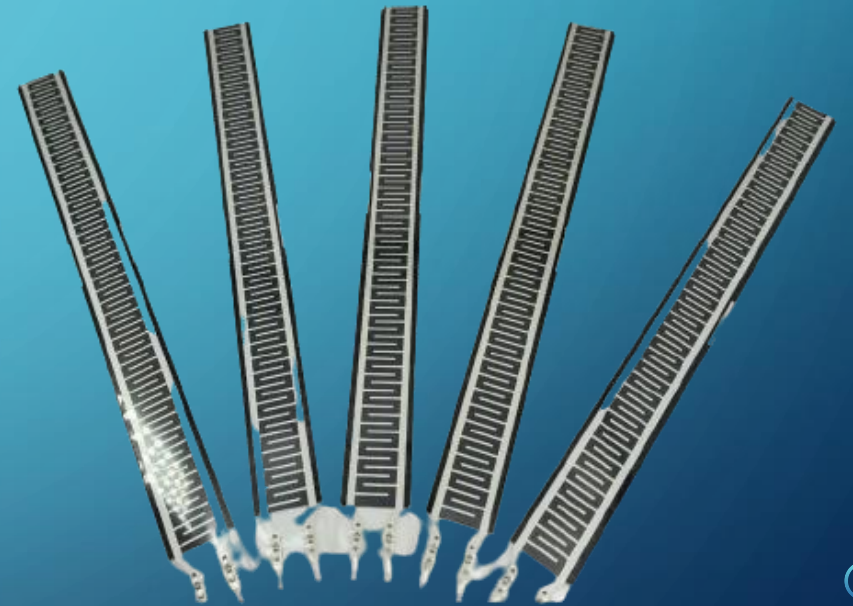
2) Discussing Process

- We used the thin-film pressure sensor because we think that it is safest, as other sensors may be used illegally.



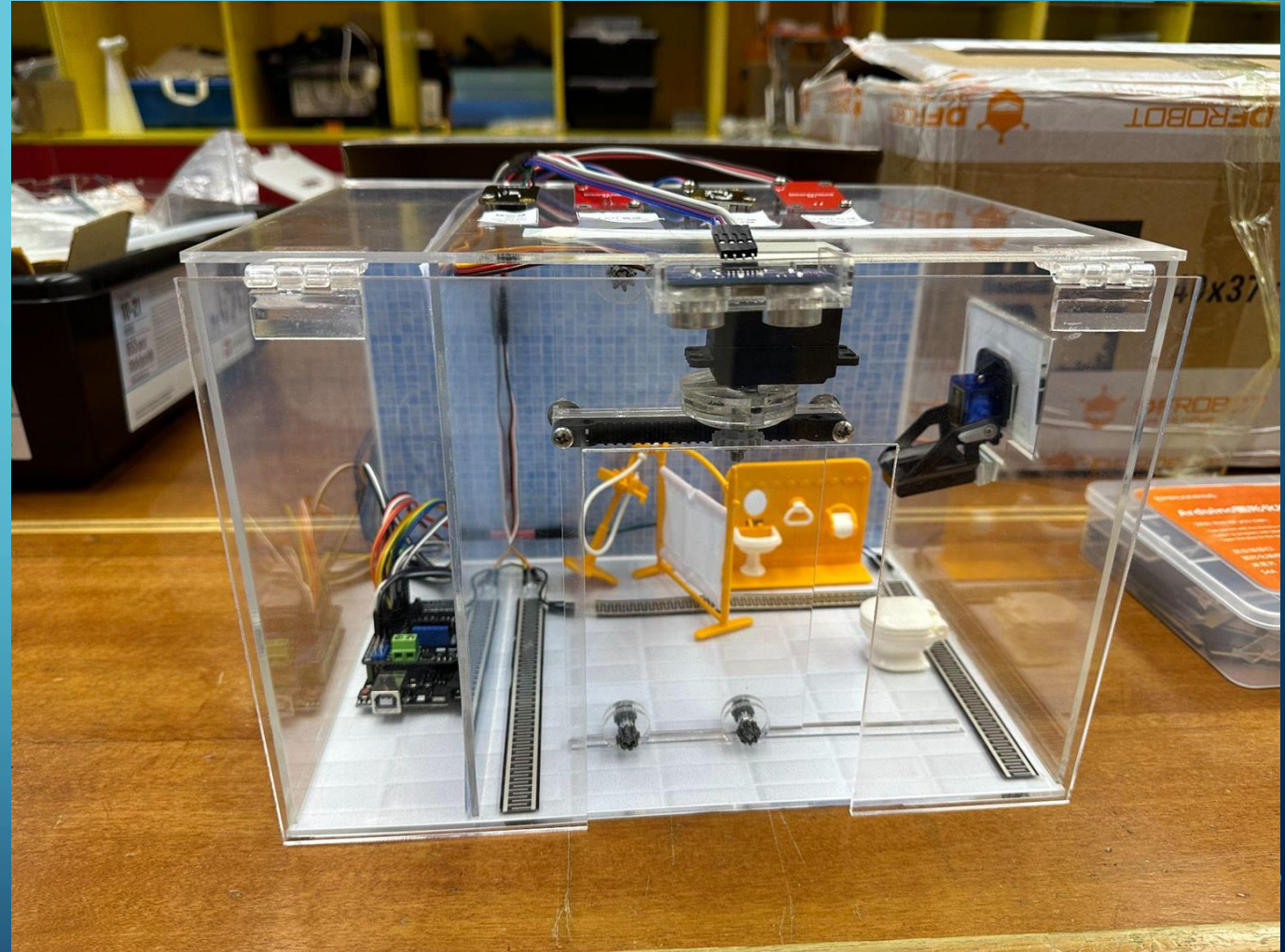
3) Scientific method and principle of Resistive Pressure Sensor

- If pressure is generated, it acts on the surface elastic material and activating the sensor, thus meaning that the resistance changes, and leading the current signal to also change. That is to say that when this sensor is actually used, pressure is applied to the sensor, then leading the current signal to change.



4) Main contribution

- This smart machine can make bathing more safe and more people can be rescued immediately.



5) Operating Instructions

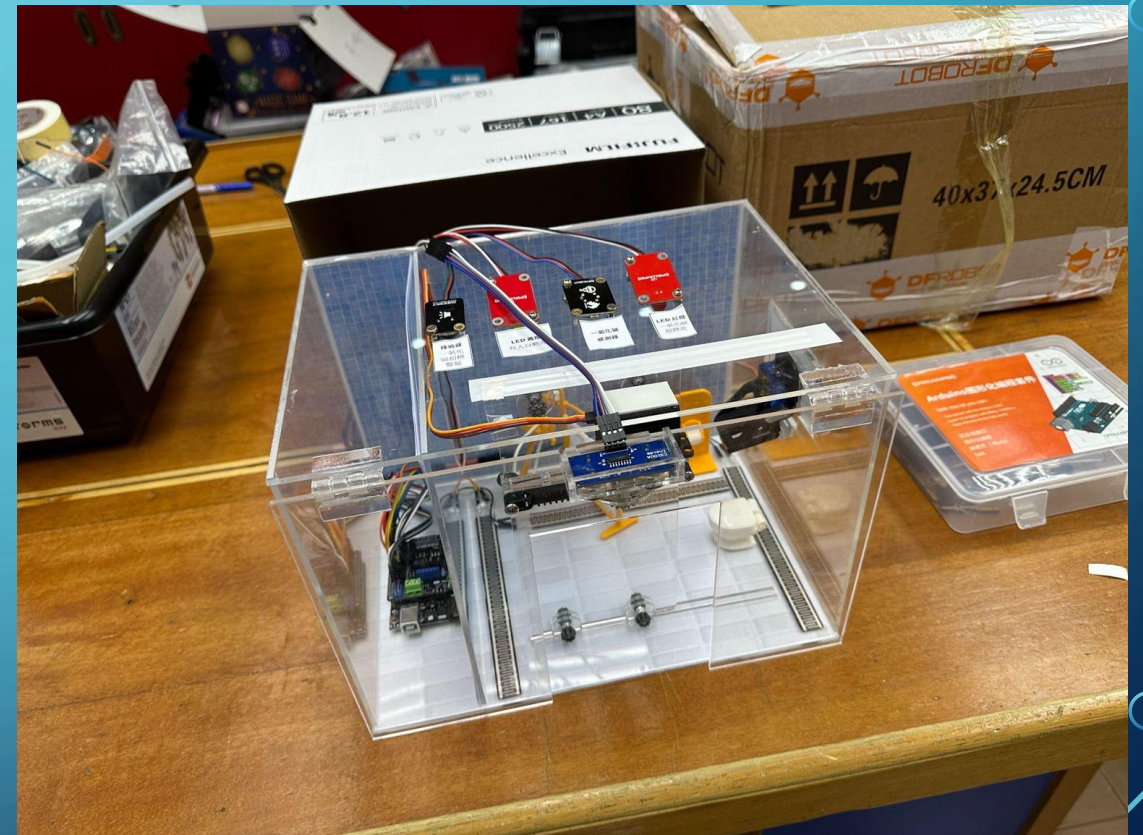
Resistive pressure sensors are laid around the walls and underground and a carbon monoxide detection sensor to sense the pressure force or the safety standard.

If both things are suspected,

a window will open automatically,

the red LED light will be automatically turned on,

the buzzer will sound an alarm and the electric door lock will be automatically opened all through a pre-set program, so as to achieve the goal of initially discharging most of the harmful gas.



6) Summary

- We used artificial intelligence to detect whether there is carbon monoxide in the bathroom and whether there is a fall.
- Its purpose is to protect ourselves and our health.

