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Title: Indoor CO2 monitoring system using microcontroller via Bluetooth for coronavirus prevention

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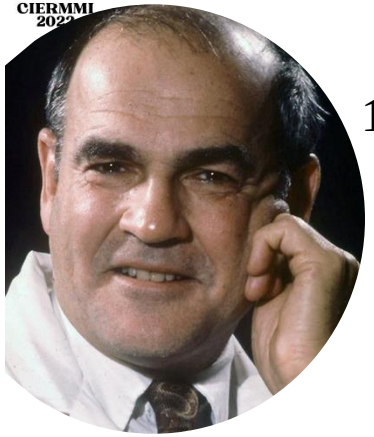

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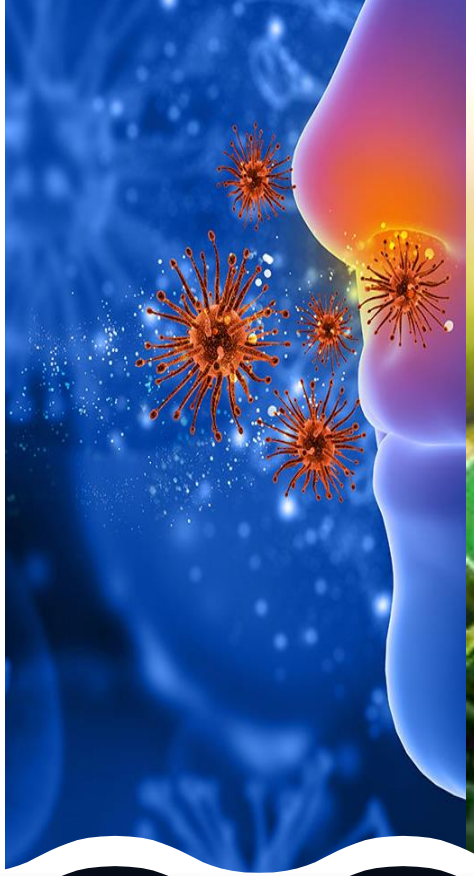
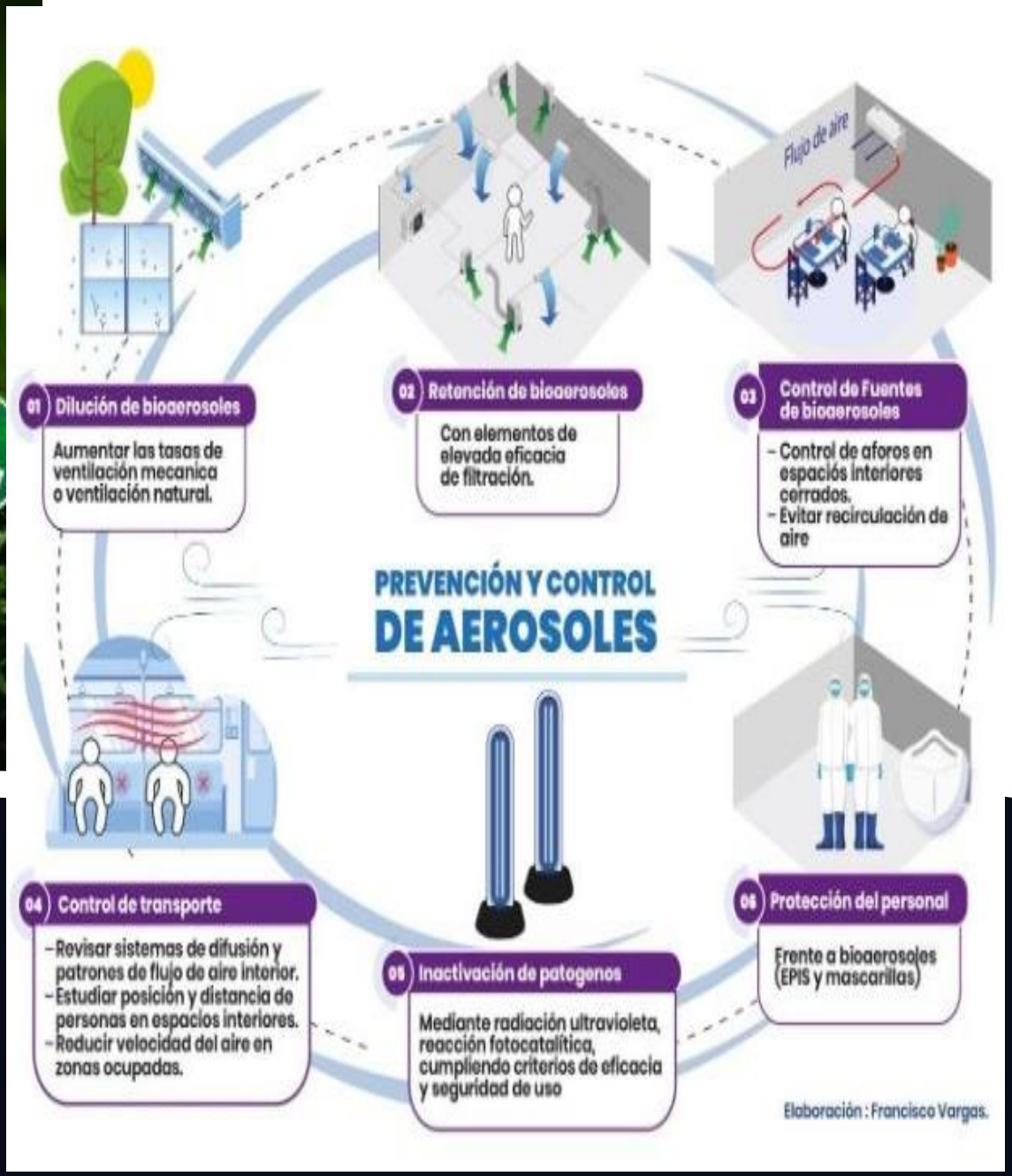
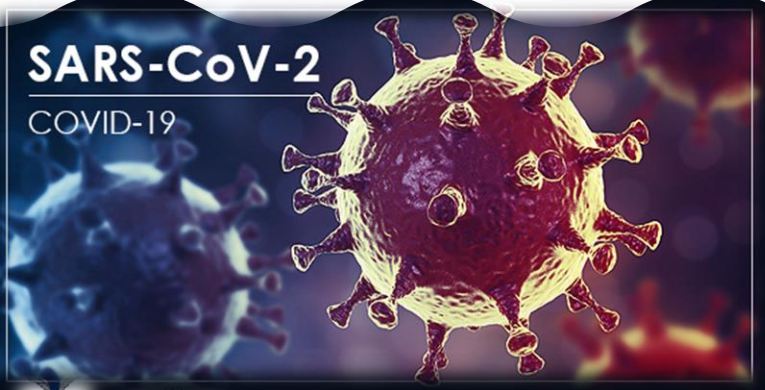
S. XIX

Introduction





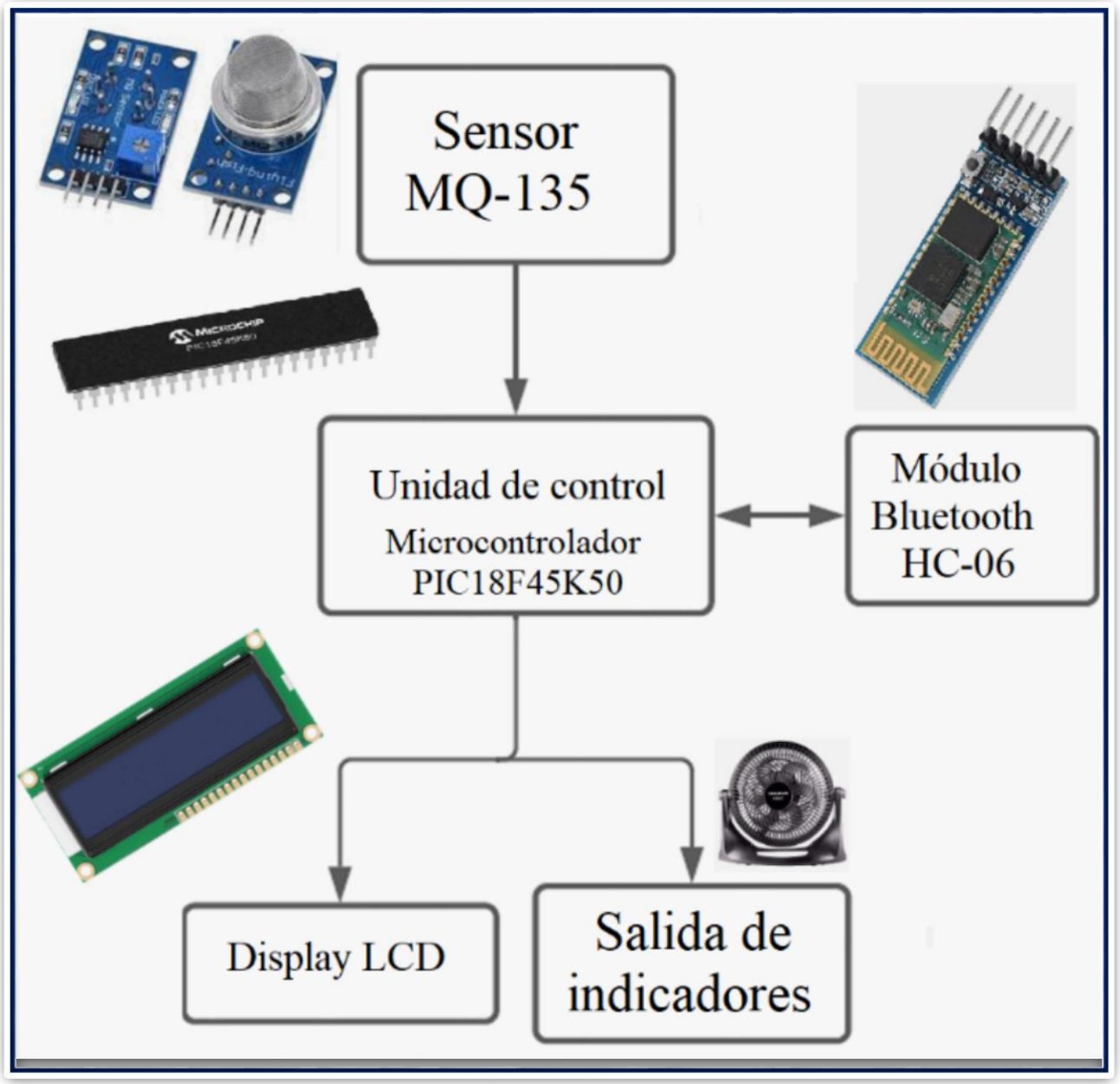


Introduction

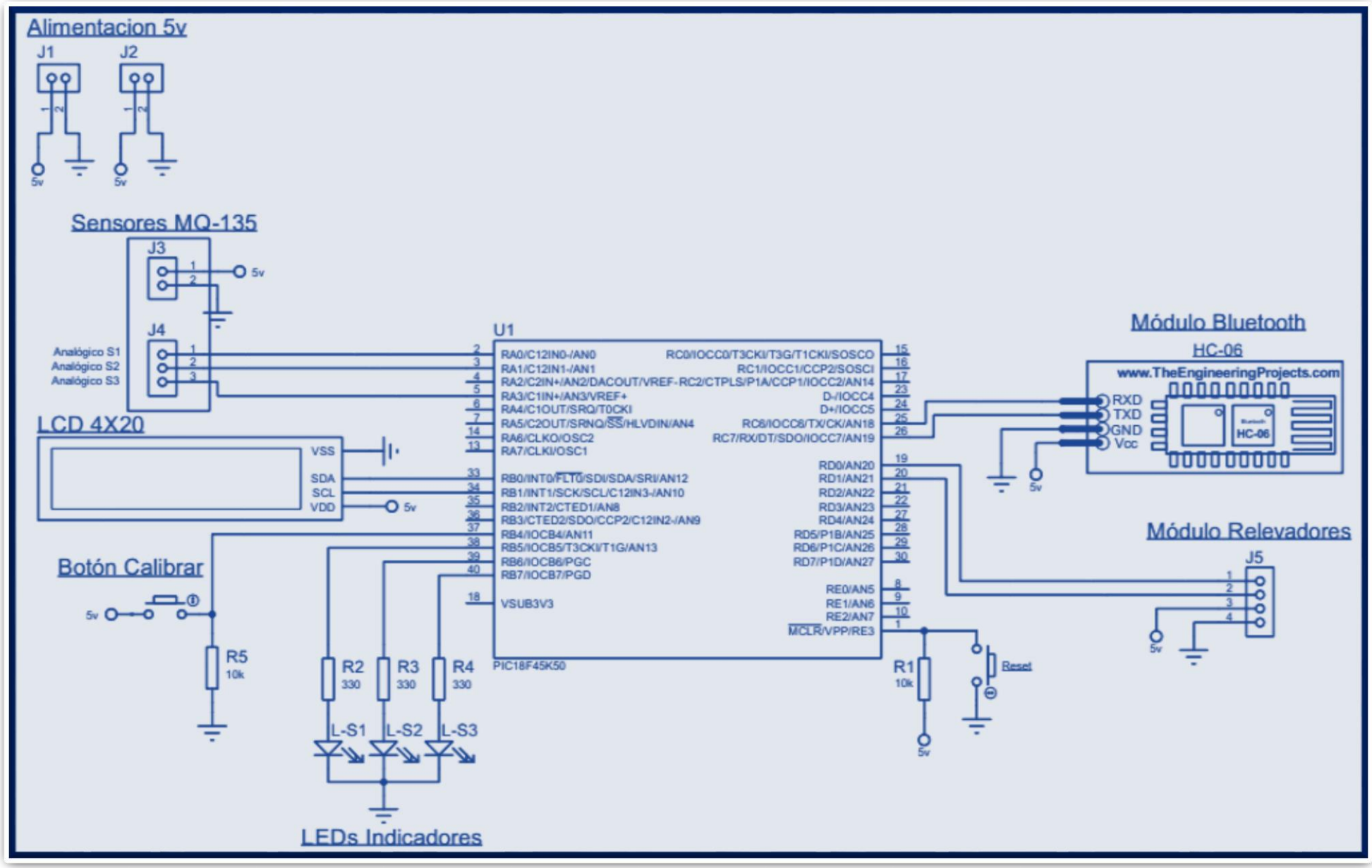
Objetive

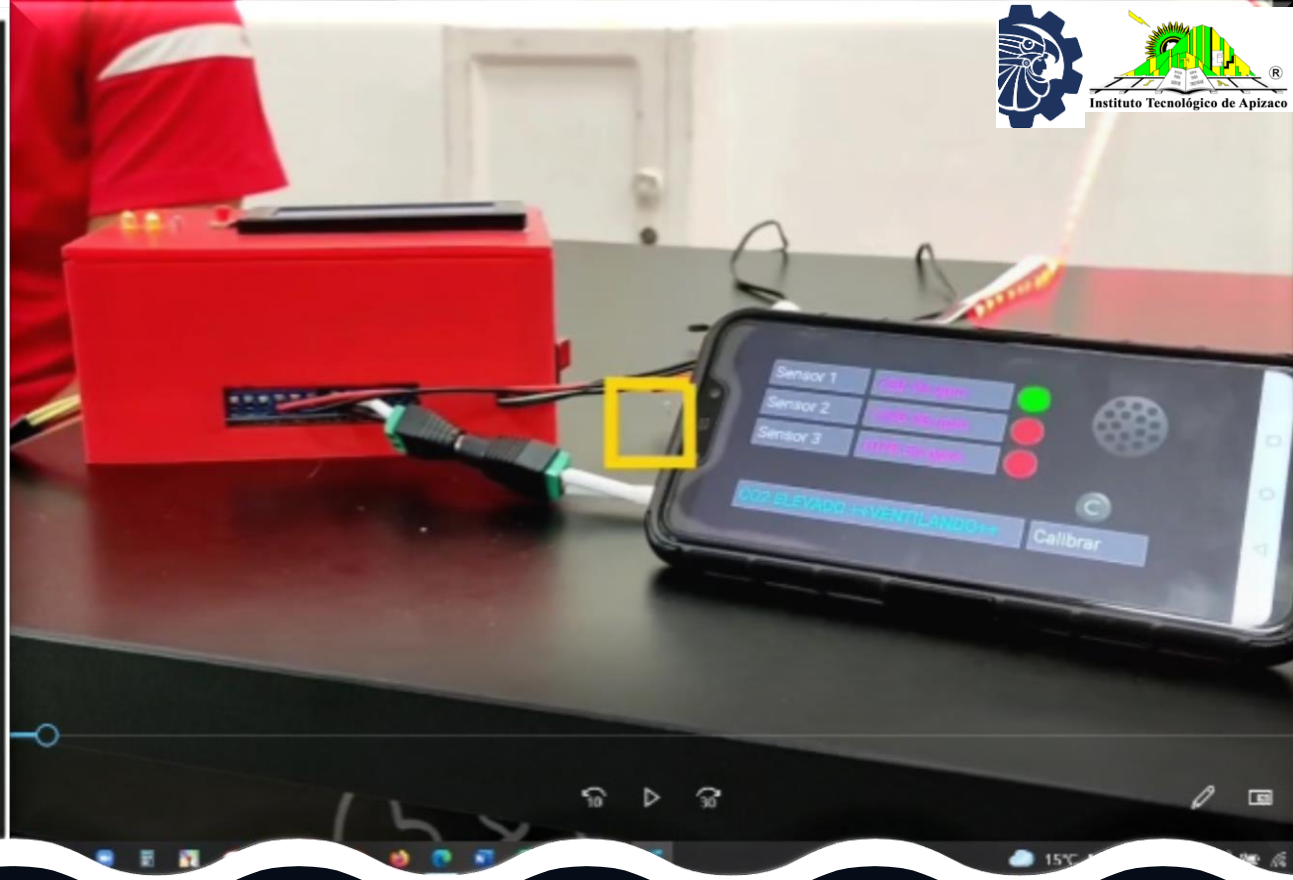
Design and implement a CO_2 level detection system within a given area, through a bluetooth alert system, on a mobile device, using a microcontroller.

Methodology

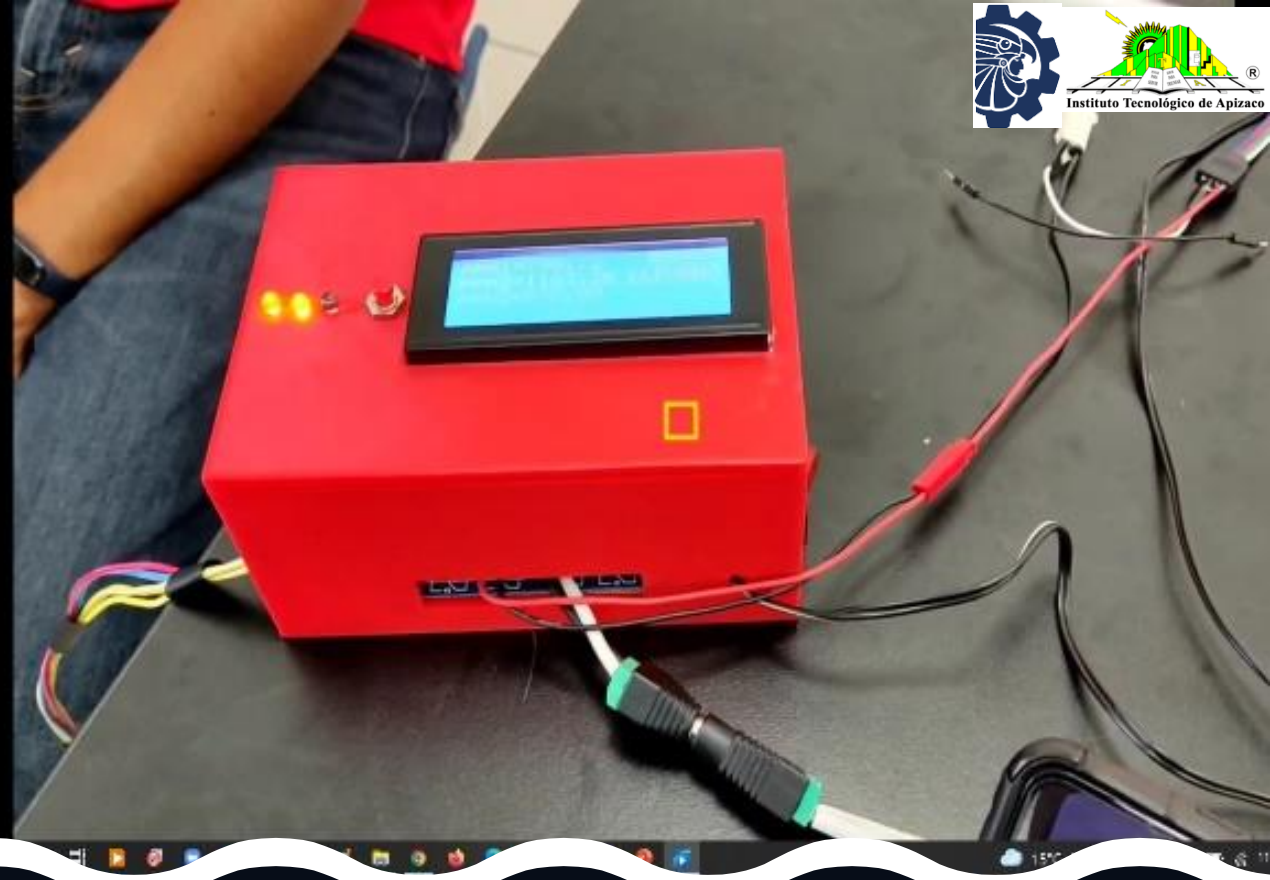


Methodology





Methodology

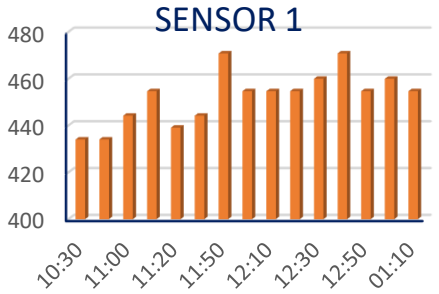


Results

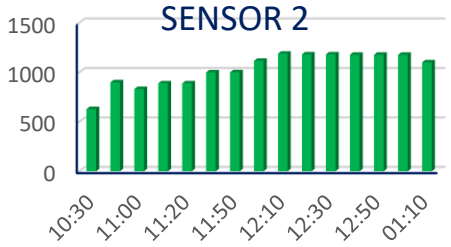
Results

Tabla 1. Mediciones de los 3 sensores monitores del CO_2.

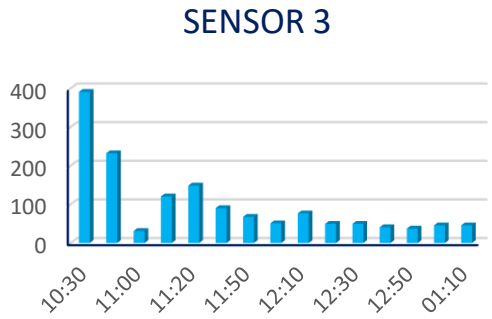
HORA	SENSOR 1	SENSOR 2	SENSOR 3
10:30	434.05	628.89	391.02
10:40	434.05	899.19	232.12
11:00	444.23	831.24	31.28
11:10	454.67	888.85	120.61
11:20	439.11	888.85	148.7
11:40	444.23	999.19	90.3
11:50	470.82	1000.47	67.73
12:00	454.67	1116.11	50.97
12:10	454.67	1188.6	76.56
12:20	454.67	1181.18	49.61
12:30	459.98	1181.18	49.61
12:40	470.82	1177.37	40.84
12:50	454.67	1177.37	37.45
01:00	459.98	1177.35	45.7
01:10	454.67	1100.47	45.7



2 metros



4 metros



6 metros

Conclusions

Currently keeping work environments free from the possibility of contagion of coronavirus is paramount. Prevention is achieved with the sum and correct application of different strategies. Among them, the monitoring of CO2 indoors, placing extractors or fans as a corrective action for SARS-CoV-2 contagion. Being this a technological, avant-garde and economical way to keep healthy the population that needs to live together for long periods of time inside closed buildings.

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