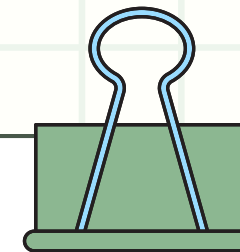


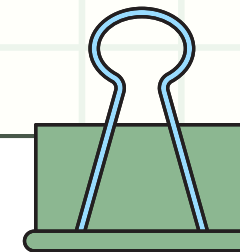
스마트팜 시스템

사용설명서

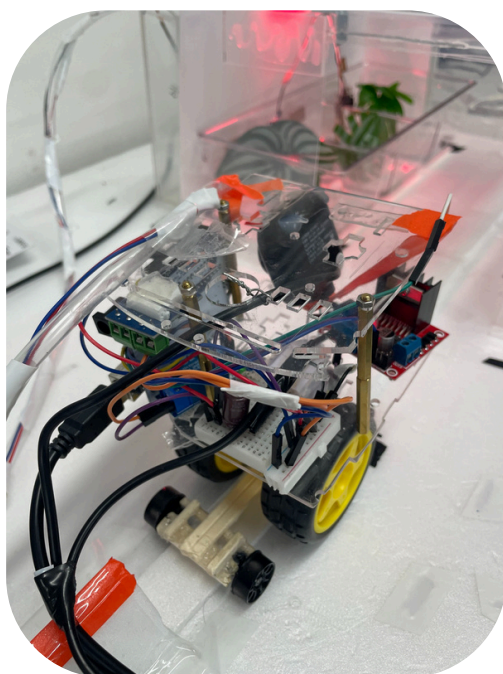


목차

- 01 제품 설명
- 02 제품 관리 방법
- 03 웹페이지 조작 방법
- 04 데이터 관리

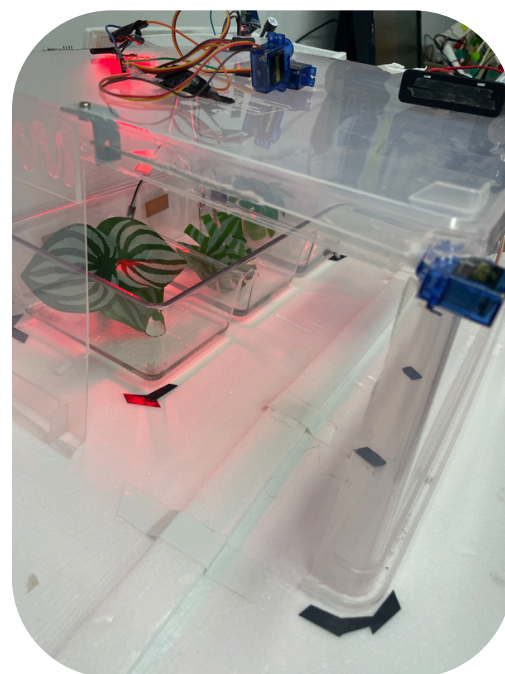


01 제품 설명



차량

레일 따라 이동하며
급수 및 촬영



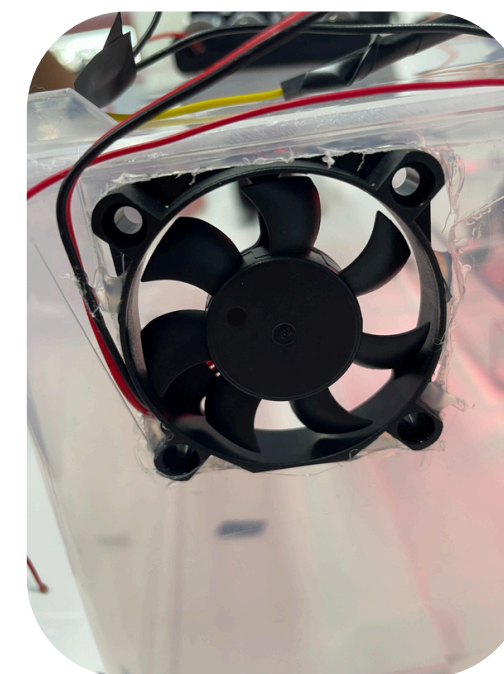
자동문

차량 이동 시 자동 개폐



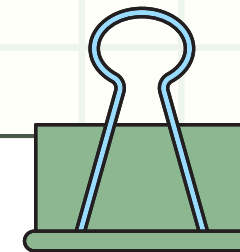
포트

토양습도 측정

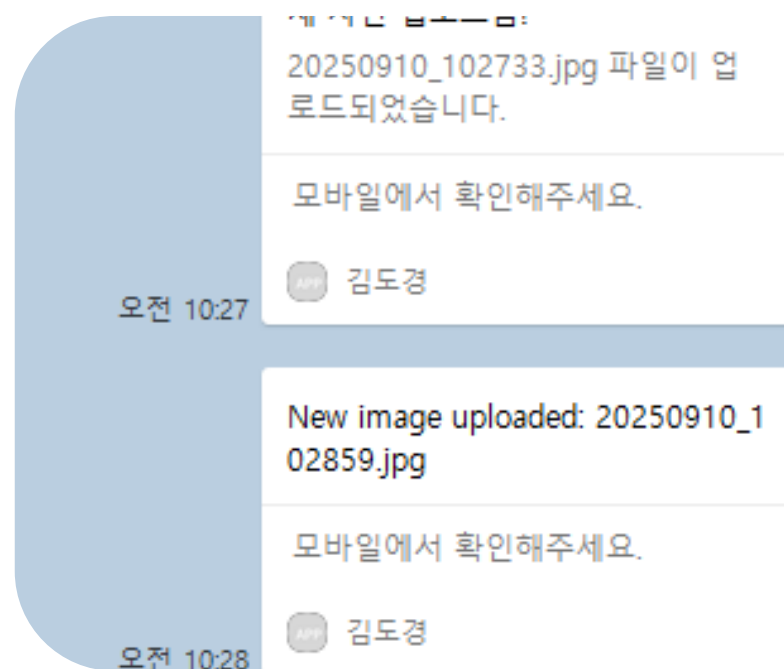
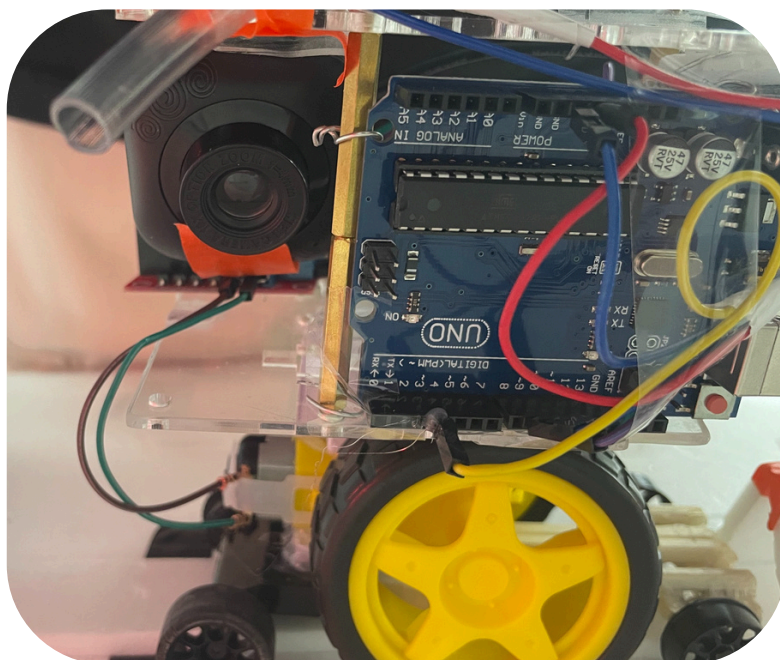


환풍기

하우스 내
온도 및 습도 조절

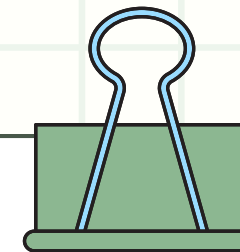


01 제품 설명



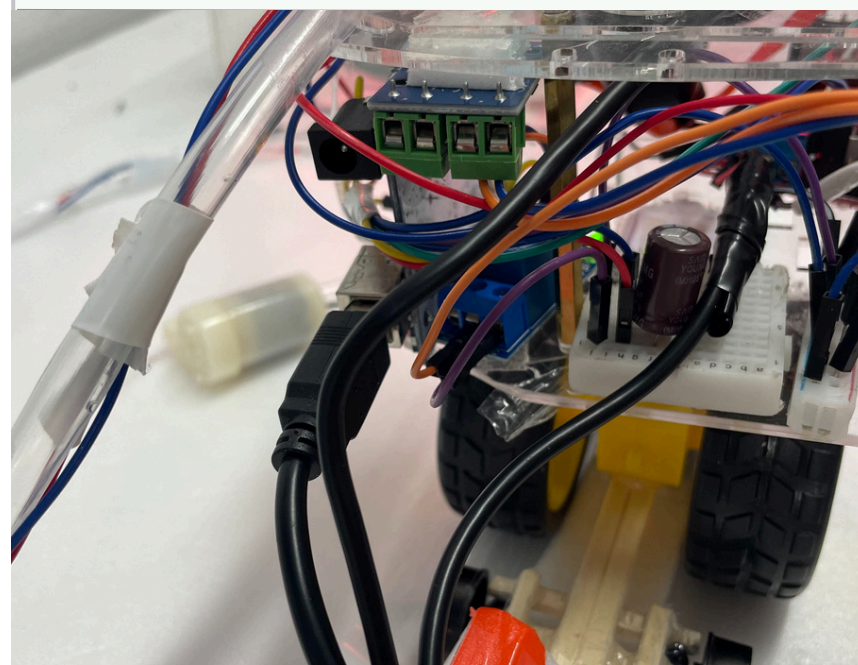
차량이 이동하며 급수와 동시에 포트를 촬영

사진 촬영 시 메시지를 통해 알림이 오며
식물 상태를 확인 가능



02 제품 관리

차량



USB전원연결

하우스

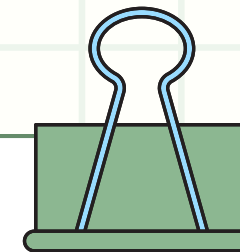


출입문용 상단 AA건전지 4개
부저, 팬용 우측 AA건전지 3개

물탱크



물부족 알림 시
물탱크 충전



03 웹페이지 작동 방법

Weather

Time	City	Temp	Description
PM 05:51	Seoul	30.76C,	clear sky

Sensor Data

P1	P2	P3	TEMP	HUM	LUX	WATER
913	912	912	25.3	49	173.33	0

Device Control

Device	ON	OFF	AUTO	Status
FAN	ON	OFF	AUTO	AUTO
DOOR	ON	OFF	AUTO	AUTO
BIRD	ON	OFF	AUTO	OFF
NEO	ON	OFF	AUTO	AUTO

현재 상태

시간, 지역, 기온, 날씨 확인

토양습도, 온도, 습도, 광량, 물탱크 수위 확인

FAN, DOOR, BIRD, NEO 제어

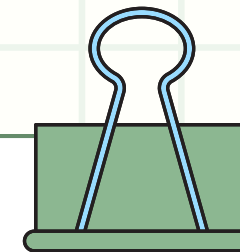
수동 ON, OFF 조작

FAN AUTO ⇒ 온도 28 ° C 이상 작동

DOOR AUTO ⇒ 차량 이동 시 작동

BIRD AUTO ⇒ 하우스 근처 움직임 감지 시 작동

NEO AUTO ⇒ 광량 30이하 작동



03 웹페이지 작동 방법

Move Commands

Command	Action
MOVE 1	MOVE 1
MOVE 1,3	MOVE 1,3
MOVE 1,2,3	MOVE 1,2,3

차량 제어

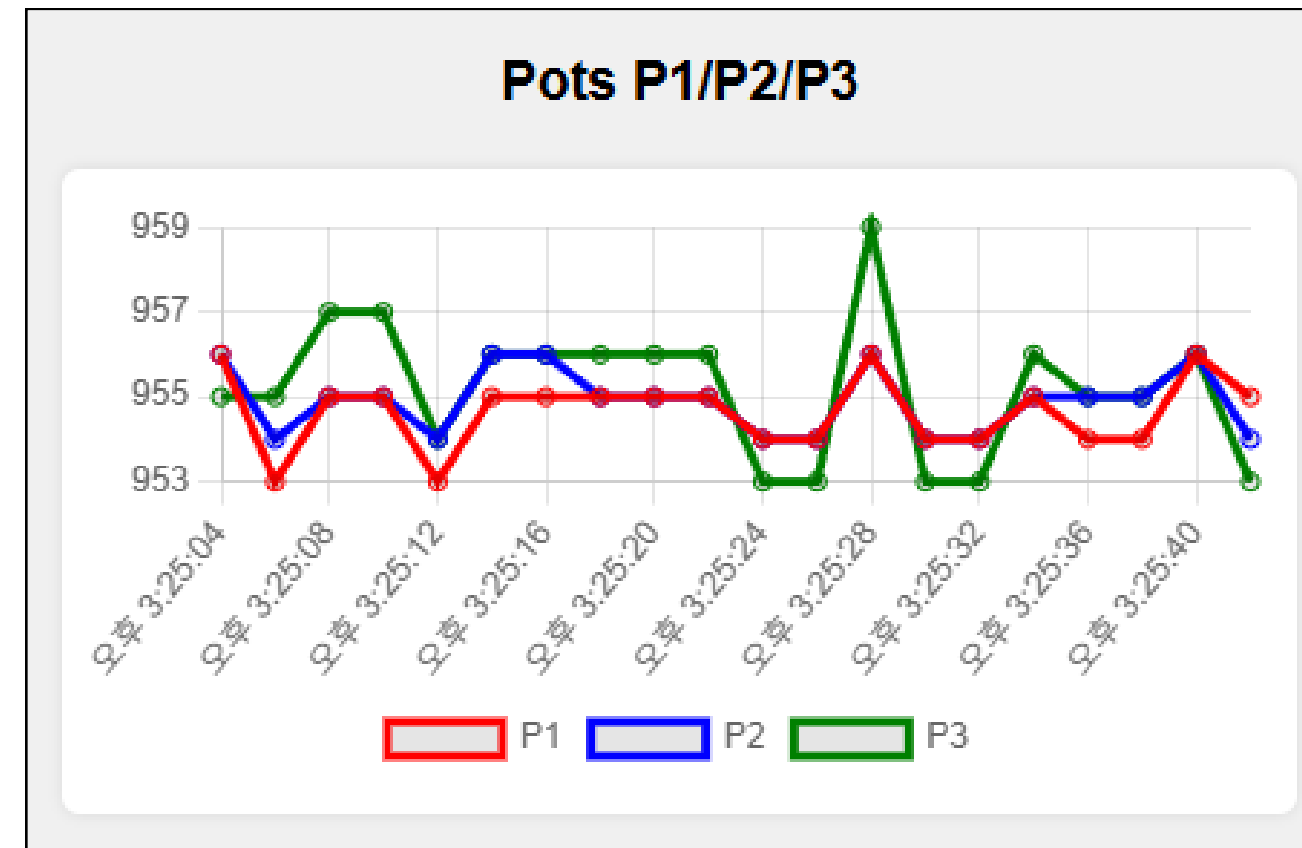
MOVE 1 \Rightarrow 1번 화분으로 이동

MOVE 1,3 \Rightarrow 1번, 3번 화분으로 이동

MOVE 1,2,3 \Rightarrow 1번, 2번, 3번 화분으로 이동

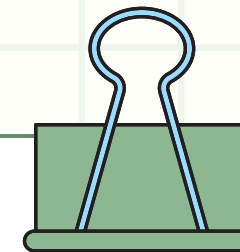


03 웹페이지 작동 방법

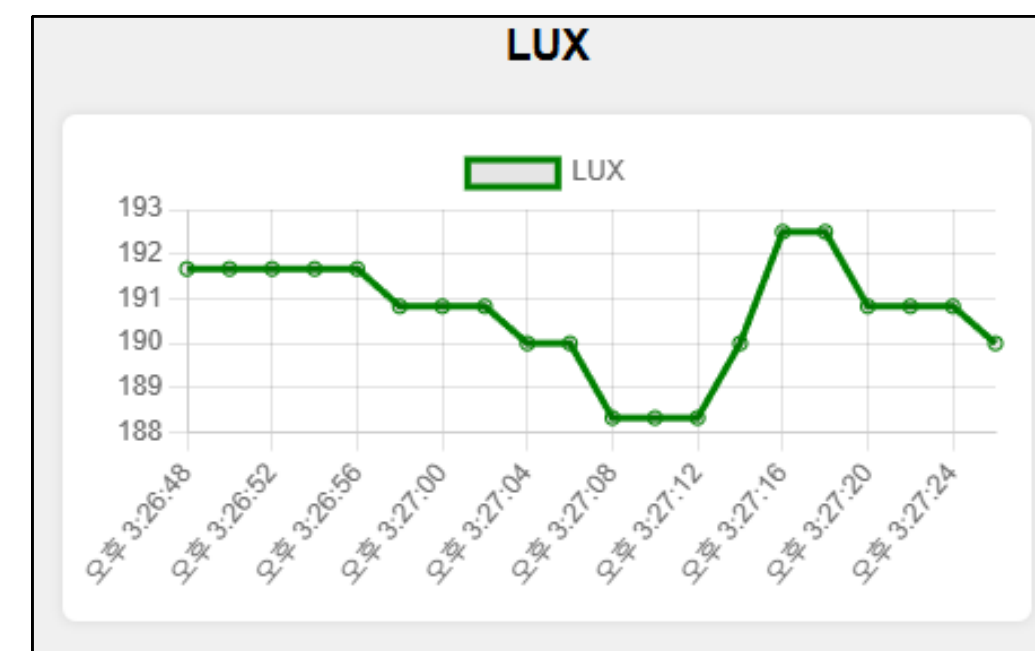
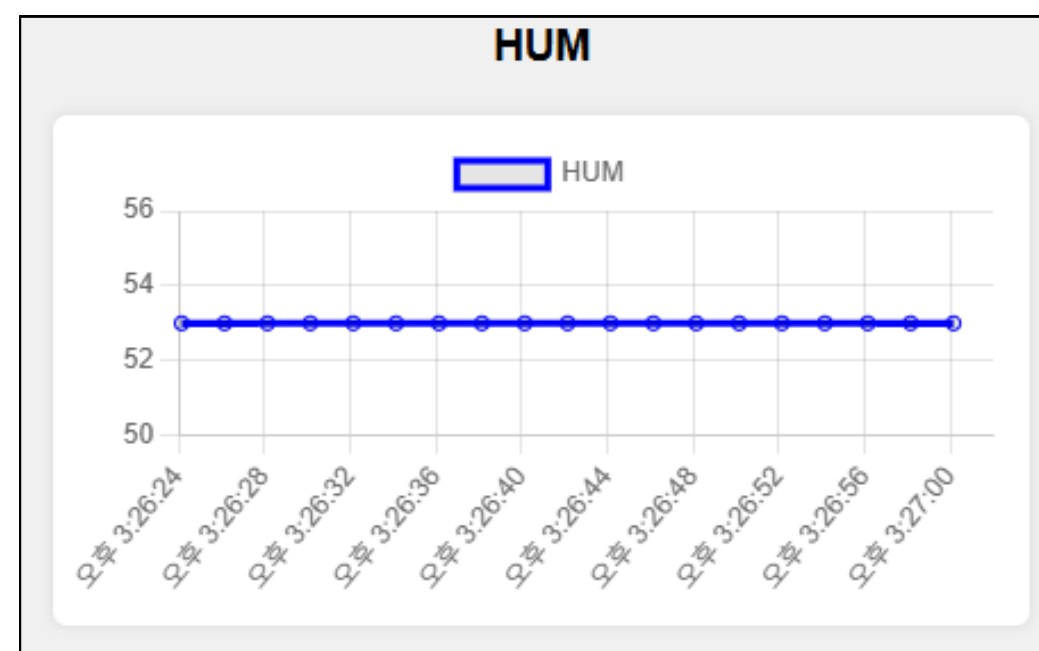
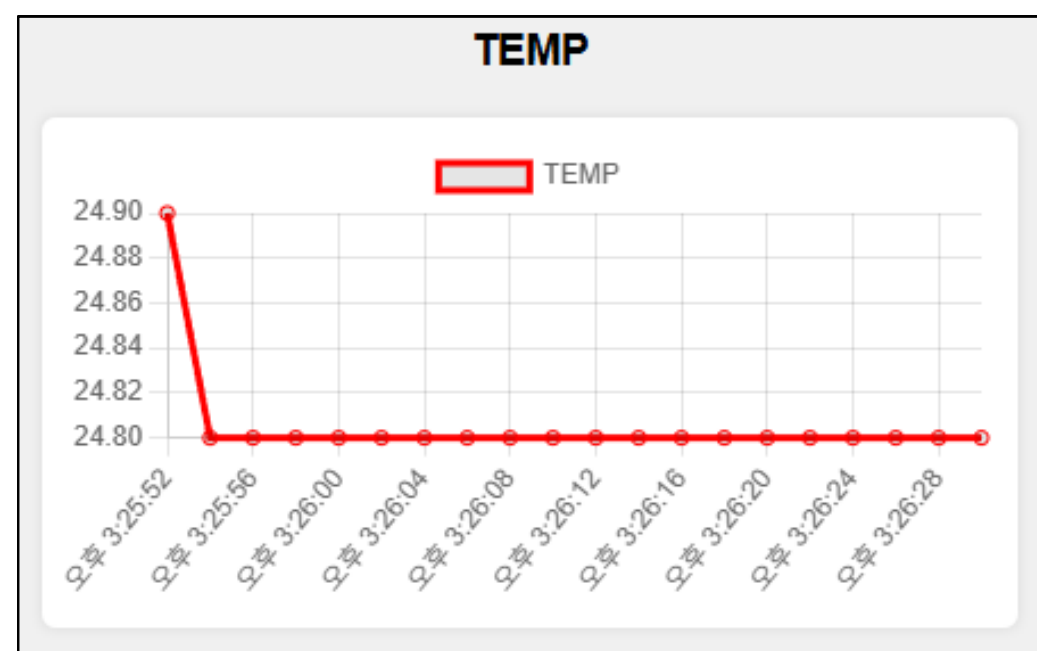


화분 토양 습도

각 화분 토양 습도 종합 확인



03 웹페이지 작동 방법

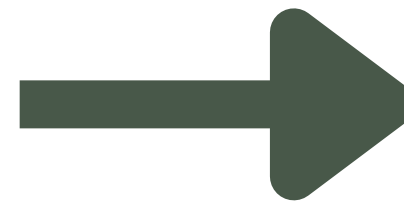


온도, 습도, 광량
하우스 내 각 변화 실시간 확인

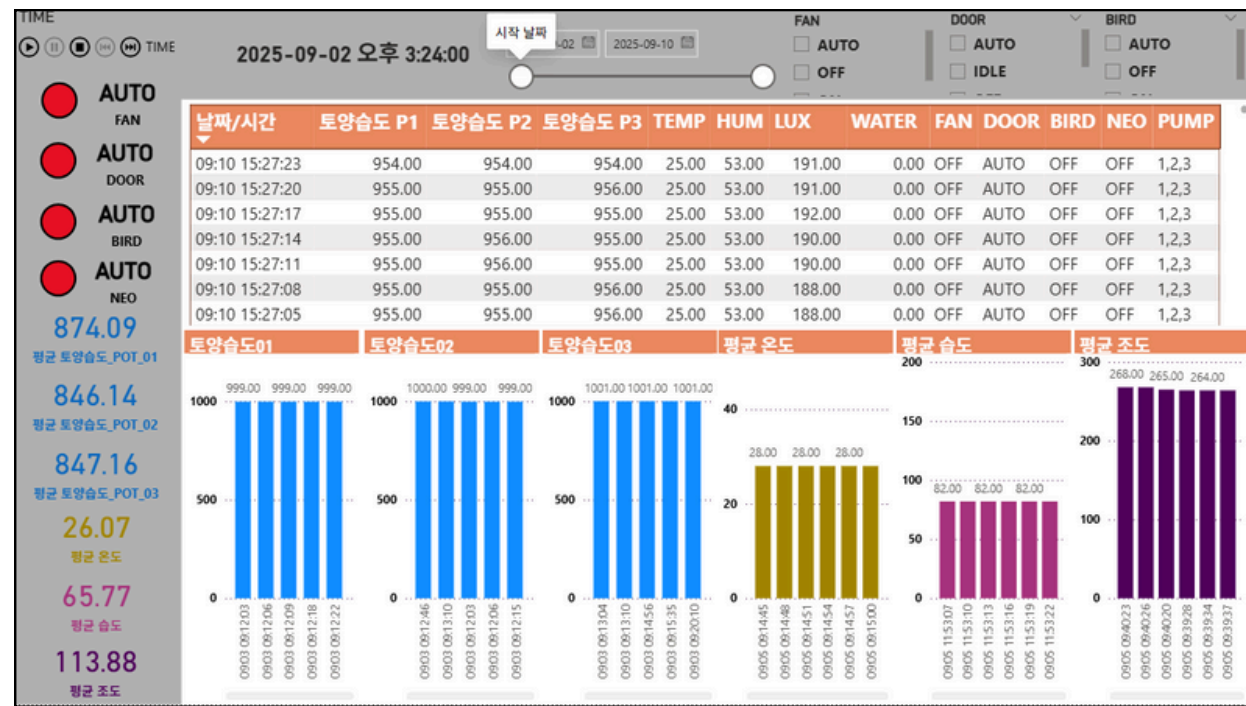
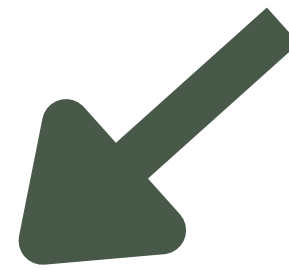


04 데이터 관리

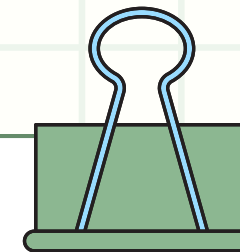
```
192.168.1.73 - - [11/Sep/2025 10:35:39] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:41] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:43] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:45] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:47] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:49] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:51] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:53] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:55] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:57] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:35:59] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:01] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:03] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:05] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:07] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:09] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:11] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:13] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:15] "GET /sensor_data HTTP/1.1" 200 -
192.168.1.73 - - [11/Sep/2025 10:36:17] "GET /sensor_data HTTP/1.1" 200 -
```



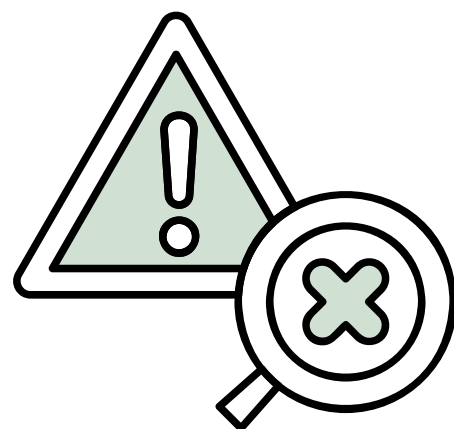
	A	B	C	D	E	F	G	H	I	J	K	L	M
12096	2025-09-11 10:31	955	955	954	26.2	47	220	0	1,2,3	OFF	IDLE	OFF	OFF
12097	2025-09-11 10:31	958	958	956	26.2	47	222.5	0	1,2,3	OFF	IDLE	OFF	OFF
12098	2025-09-11 10:31	955	955	955	26.2	47	221.67	0	1,2,3	OFF	IDLE	OFF	OFF
12099	2025-09-11 10:31	958	956	955	26.2	47	214.17	0	1,2,3	OFF	IDLE	OFF	OFF
12100	2025-09-11 10:31	955	956	955	26.2	47	217.5	0	1,2,3	OFF	IDLE	OFF	OFF
12101	2025-09-11 10:31	957	957	959	26.2	47	219.17	0	1,2,3	OFF	IDLE	OFF	OFF
12102	2025-09-11 10:31	958	957	958	26.2	47	220	0	1,2,3	OFF	IDLE	OFF	OFF
12103	2025-09-11 10:31	958	958	958	26.2	47	220	0	1,2,3	OFF	IDLE	OFF	OFF
12104	2025-09-11 10:31	958	957	958	26.2	47	220	0	1,2,3	OFF	IDLE	OFF	OFF
12105	2025-09-11 10:31	957	957	956	26.2	47	221.67	0	1,2,3	OFF	IDLE	OFF	OFF
12106	2025-09-11 10:31	957	957	957	26.2	47	218.33	0	1,2,3	OFF	IDLE	OFF	OFF
12107	2025-09-11 10:31	957	957	956	26.2	47	221.67	0	1,2,3	OFF	IDLE	OFF	OFF
12108	2025-09-11 10:31	958	958	957	26.2	47	219.17	0	1,2,3	OFF	IDLE	OFF	OFF
12109	2025-09-11 10:31	957	957	956	26.2	47	218.33	0	1,2,3	OFF	IDLE	OFF	OFF
12110	2025-09-11 10:31	958	958	956	26.2	47	224.17	0	1,2,3	OFF	IDLE	OFF	OFF
12111	2025-09-11 10:31	958	957	957	26.2	47	225.83	0	1,2,3	OFF	IDLE	OFF	OFF
12112	2025-09-11 10:31	958	957	957	26.2	47	225	0	1,2,3	OFF	IDLE	OFF	OFF
12113	2025-09-11 10:32	958	958	959	26.2	47	225.83	0	1,2,3	OFF	IDLE	OFF	OFF



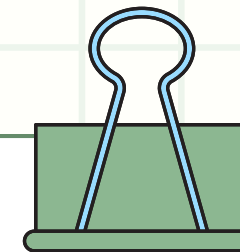
2초마다 수집데이터를 csv파일로 저장
이후 Power BI를 통해 시각화하여 관리 가능



05 사용 시 주의사항



- 포트 위치를 임의로 이동하지 마세요.
- 차량 경로를 임의로 수정하지 마세요.
- 차량 상단에 올라타거나 무거운 물건을 올려두지 마세요.
- 차량 이동 경로 내 통행 시 주의하세요.
- 이상 현상 발생 시 강제종료 버튼을 사용하세요.



감사합니다

THANK
You!