

Industrial IoT

Team *DEW*

조장: 장원아

조원: 박예림, 이제민



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01 Problem, Solution Definition

Final Term Project

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Cam을 통한
물체 인식



기계학습된 인공지능을
통해 라벨 유무, 재활용
불가능 PET Class 판단

라벨O(Class3)



분류된 Class 정보를
아두이노에 전송



해당되는 Class의
서보모터 동작을 통한
물체 분류 진행

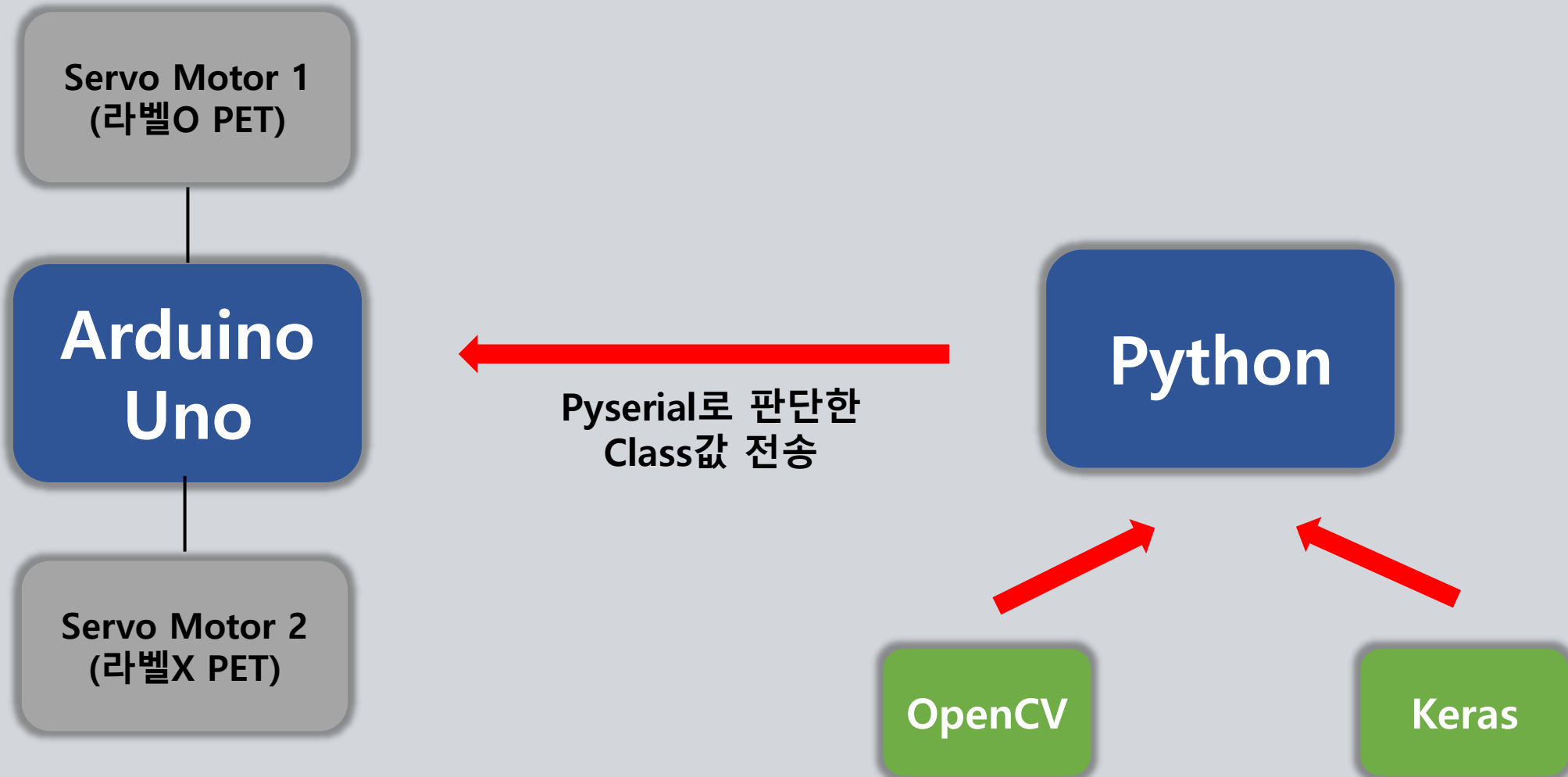


Digital Signal

01 Problem, Solution Definition

Final Term Project

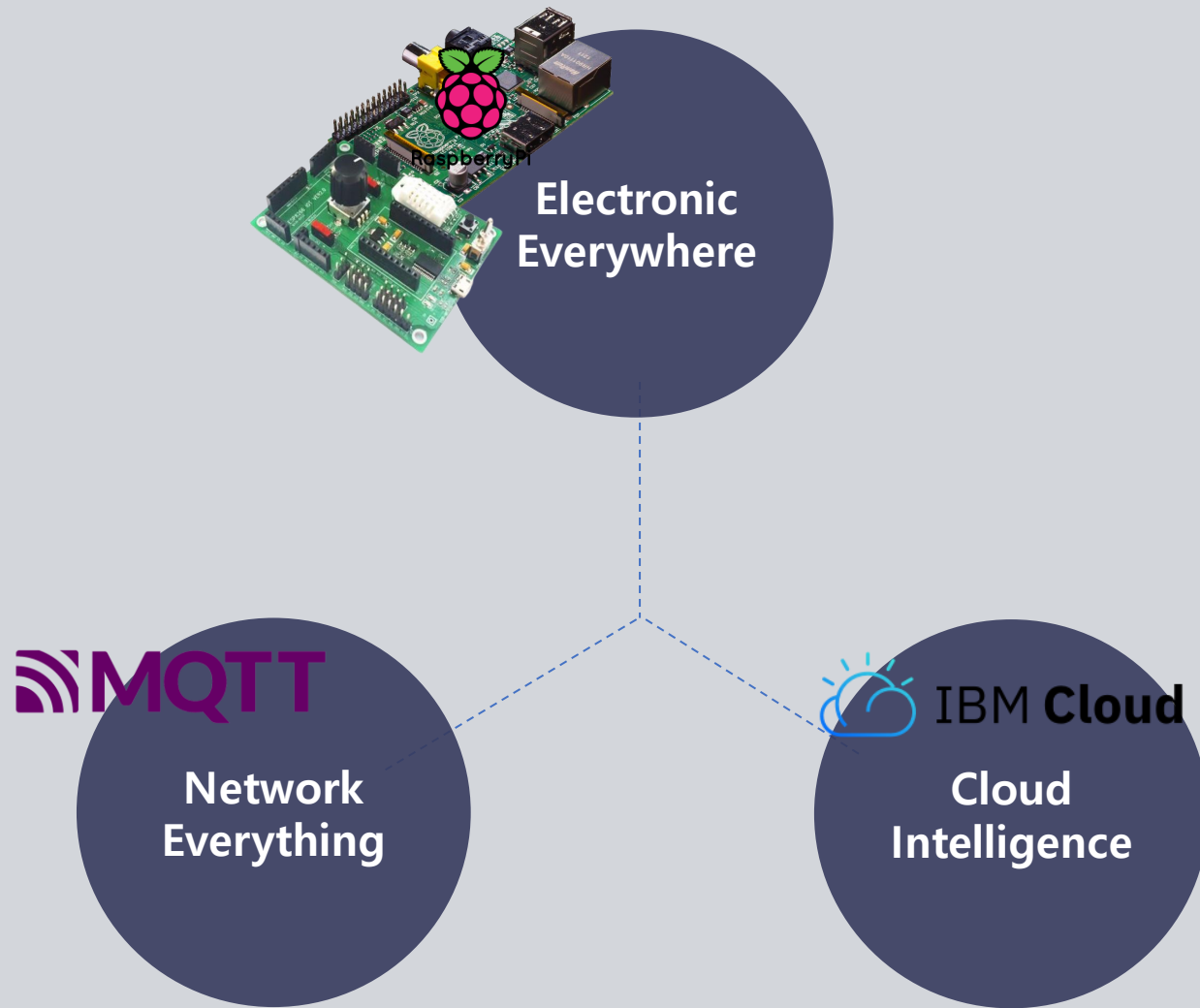
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01 Problem, Solution Definition

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$$\text{IoT} + \text{Logistics} = \text{IoT Conveyor}$$

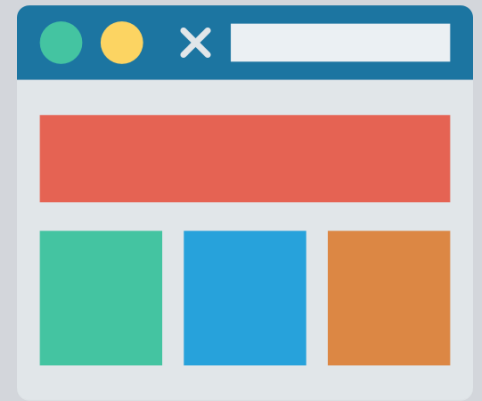
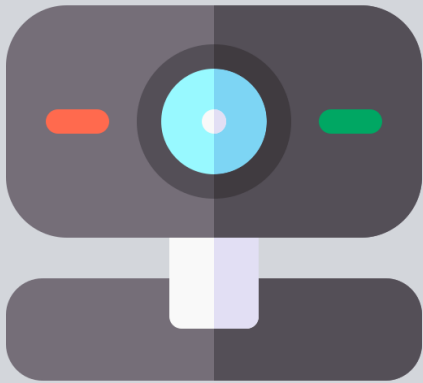
The equation defines the IoT Conveyor as the combination of IoT and Logistics. The "IoT" term is represented by a blue logo with cyan signal waves. The "+" sign is a large red cross. The "Logistics" term is represented by an illustration of a delivery truck, a clock showing 24h, and several yellow cardboard boxes. The result, "IoT Conveyor", is written in bold black text with "IoT" in red.

02 Reason of intelligence Placement

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Counting PET; Cloud Computing



카메라로 PET 인식 후,
라벨 유무, 재활용
불가능 PET 판단

판단된 Class값을 받아서
분류된 PET 수량 count

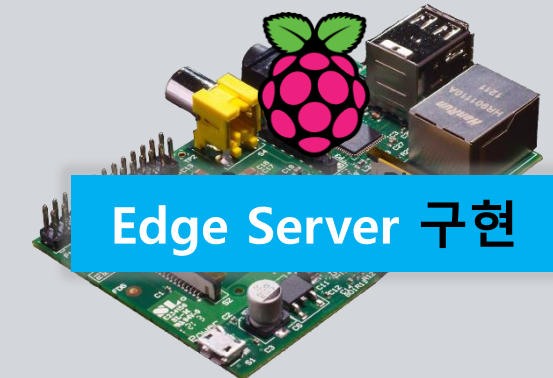
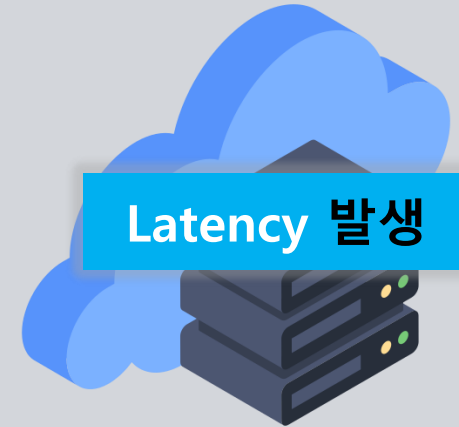
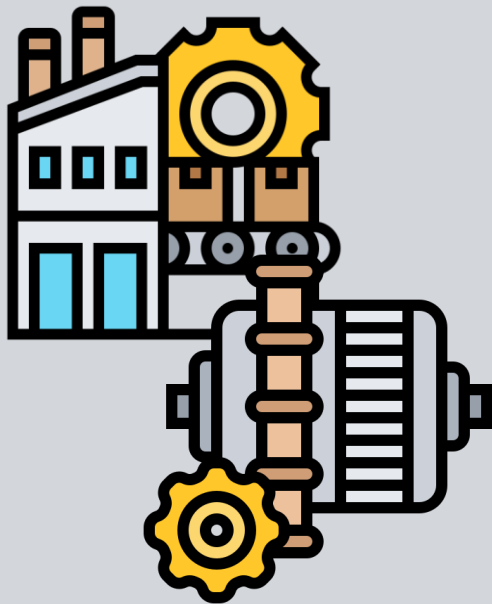
mybluemix.net/ui
에서 쉽게 수량 확인 가능

02 Reason of Intelligence Placement

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IIOT (Servo Motor Control); Edge Computing

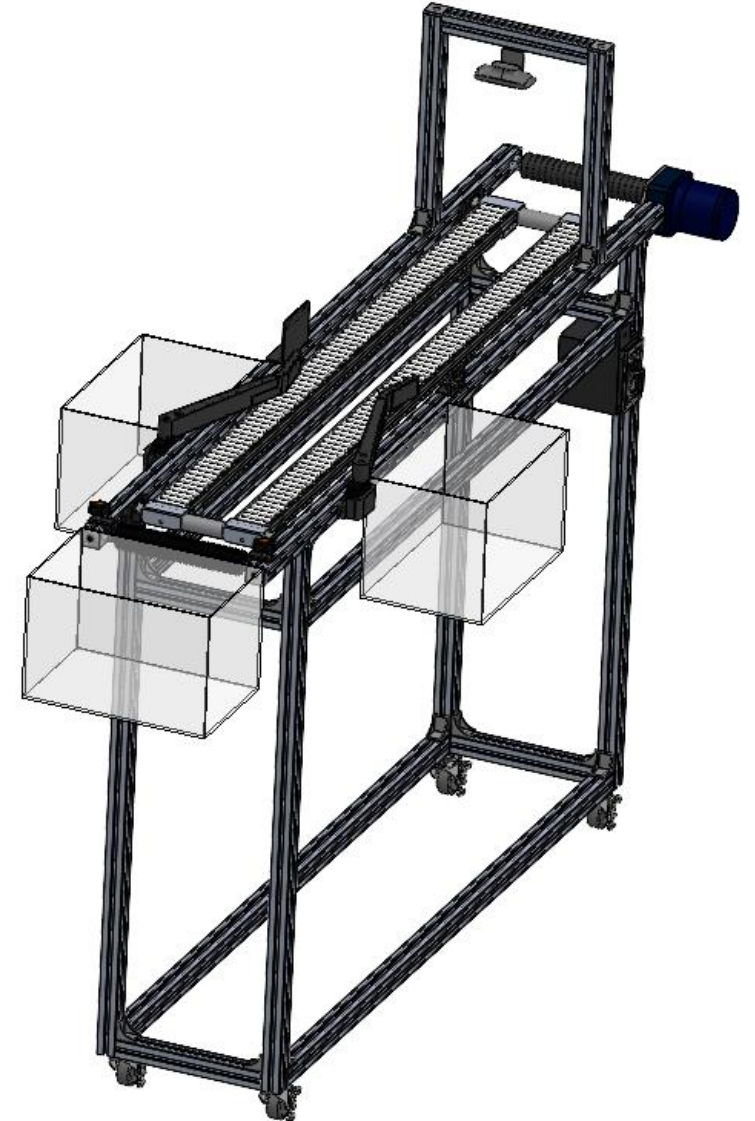


03 Architecture & Technologies

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Hardware

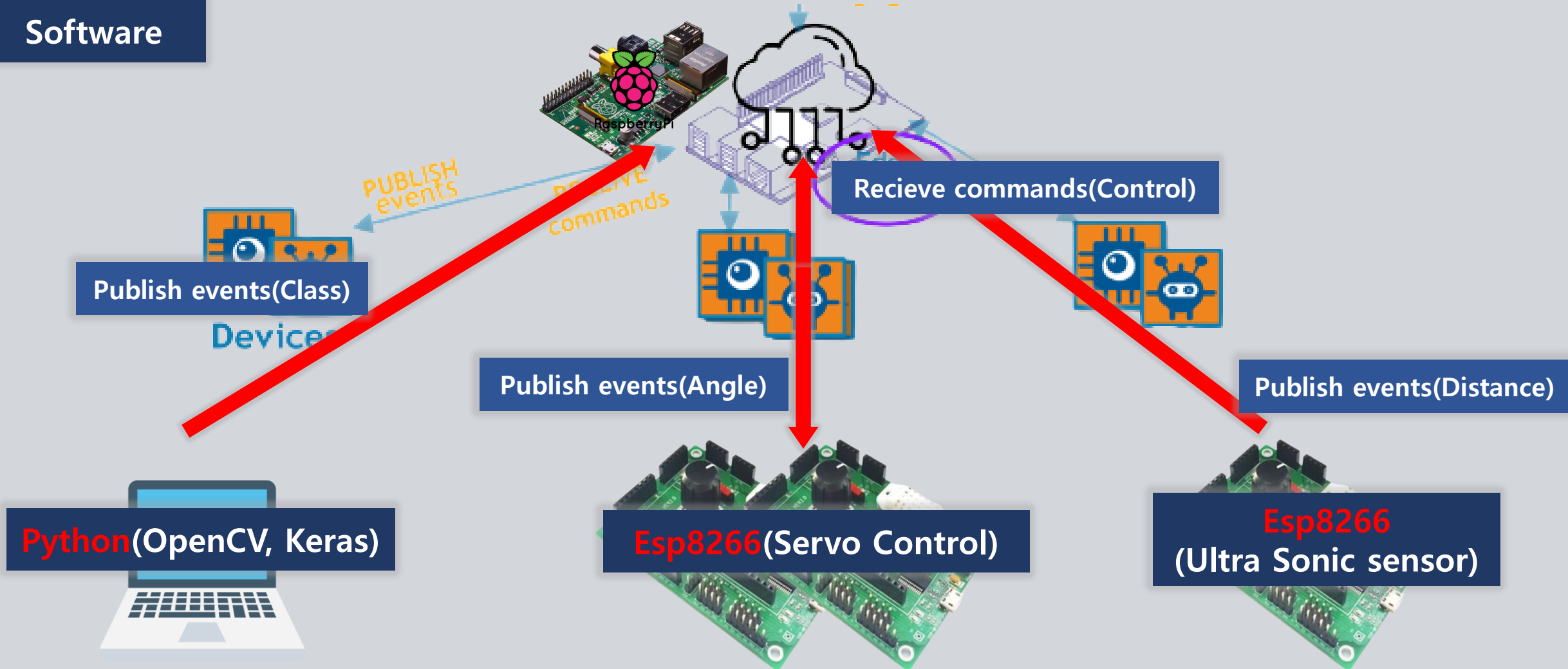


03 Architecture & Technologies

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Software

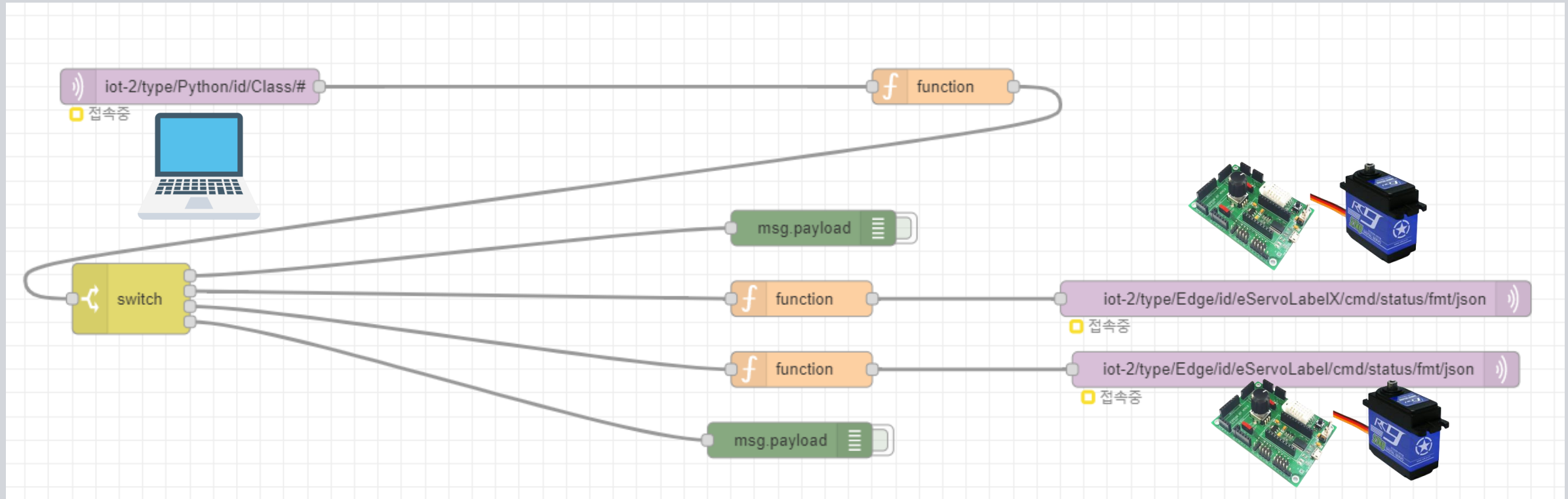
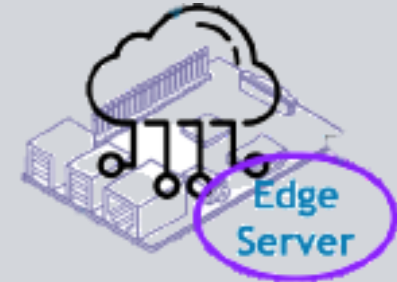
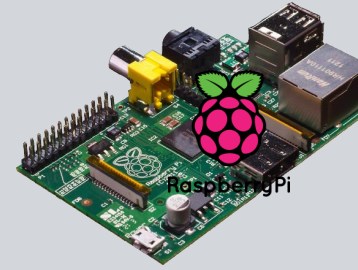


03 Architecture & Technologies

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Python(OpenCV, Keras), **Esp8266**(Servo Control)

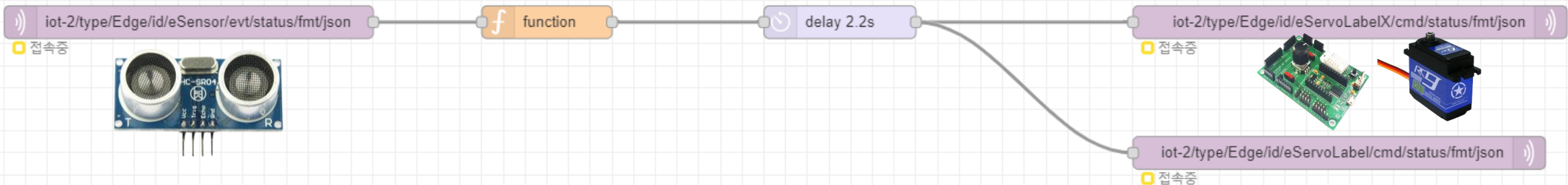
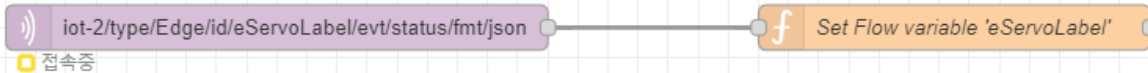
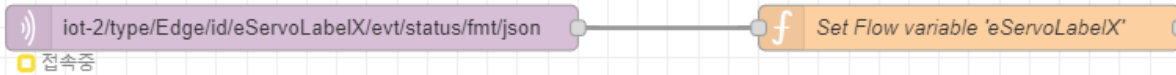
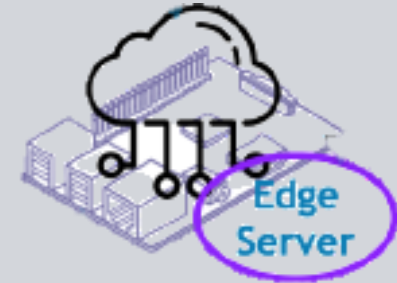
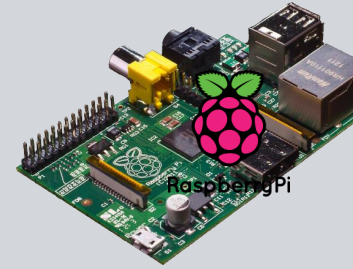


03 Architecture & Technologies

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Esp8266(Ultra Sonic sensor)

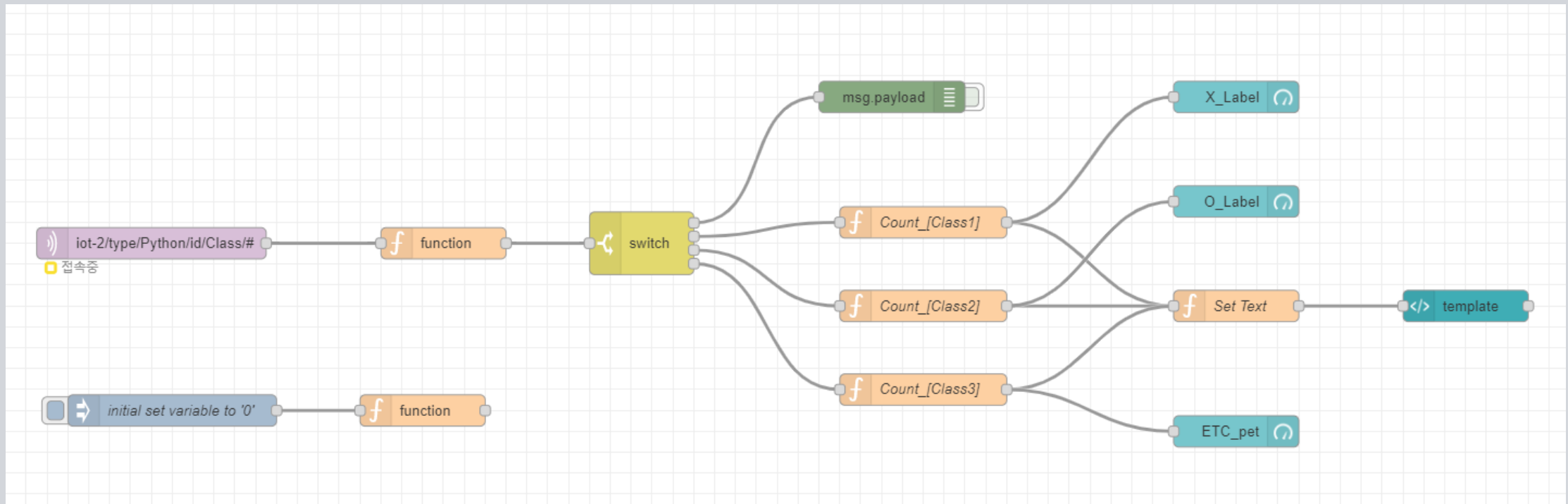
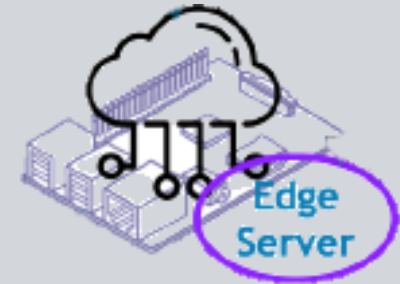
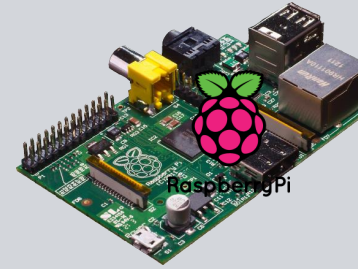


03 Architecture & Technologies

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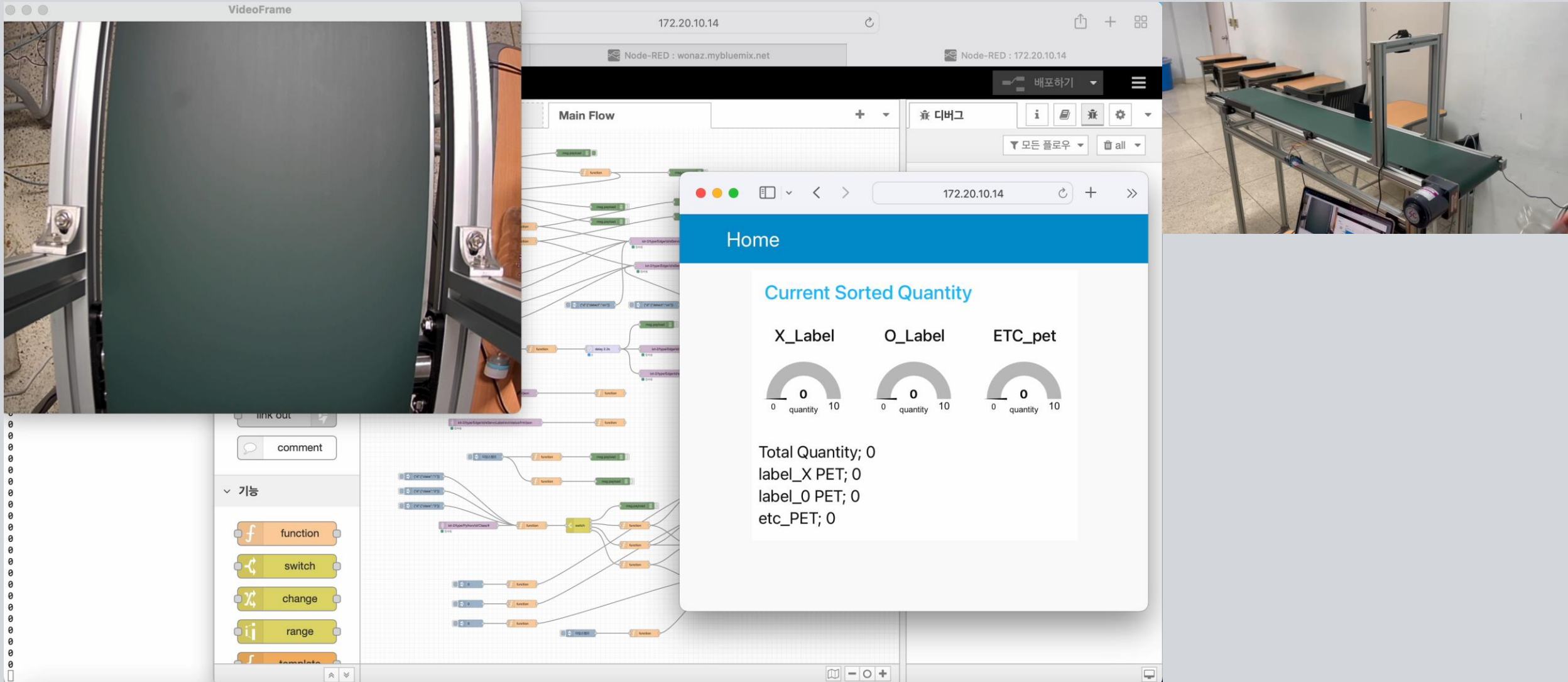
Dashboard



04 Live Demo

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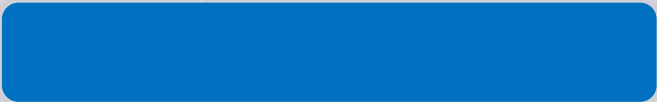



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Process

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<div>Task</div> <div>Date</div>	May. 4 th Week	May. 5 th Week	June. 1 st , 2 nd Week	June. 3 rd Week
Changing subject				
Planning functions and purchasing sensors				
Python virtual environment creation and device creation				
Ultrasonic sensor and servo motor coding				
Configuring Node-Red				
Configuring Dashboard				
Video shooting (wrapping up)				

05 Limitation and Future Improvements

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클래스 분류에 오류 발생



클라우드에 등록된
사용자 정보 탐색



해당 사용자에게 경고 알림

Q & A

Team *DEW*

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