User's Manual for Trash Classification Line

EOF

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Getting Started

After running the main program on the server, entering the "activate lane" command in the command line initiates the program on the client (lane), and the lane starts automatically. Once the lane is operational, placing plastic trash on it will automatically classify the trash as recyclable or non-recyclable based on the currently applied trash classification model. To change the trash classification model, press the yellow button on the lane and request a change to the desired model by speaking, and the model will be updated. Available models include the plastic bottle label classification model and the glass bottle iron lid classification model. To stop the lane, press the stop lane button on the server GUI. To resume operation, press the operate lane button.

GUI

- **Configuration**

    - **Image Display Window**

        In the image output window, images obtained from the camera attached to the lane are displayed.

    - **Button**

        - Lane Start Button

            When you press the lane start button, the lane starts operating.

        - Lane Stop Button

            When you press the lane stop button, the lane comes to a halt.

    - **Command Line**

        - activate lane1

            Entering 'activate lane 1' initiates the main program of the client (lane).

Hardware

- **Configuration**
    - **Lane**
        - This is the lane where you place the trash.

    - **RC Servo Motor**
        - The RC Servo Motor enables the movement of the lane.

    - **Button**
        - Voice Recording Button
            - Pressing the voice recording button initiates voice recording. This recording should be related to questions about the user manual. By asking questions based on the voice recognition manual in the user manual, you can hear responses related to it.

        - Lane Start / Stop Button
            - The button to start or stop the line

    - **Barrier Arm(Servo Motor)**
        - To classify recyclable and non-recyclable trash, the path of the trash is blocked.

    - **Speaker**
        - Voice responses related to the user manual are displayed. The responses are generated based on questions regarding the voice recognition manual.
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    - **Camera**
        - It is used to take input for trash videos. Trash videos are used to determine if they are recyclable.

- **LCD**
    - It indicates the current status of the line. The line can be in one of the following states: operational, stopped, or recording.

Voice recognition Manual

- Questions(Q) & Answers(A)

- Q1. What is your current model? (현재 모델이 뭐야?)
- A1. Verify the currently applied model.

- Q2. Please tell me the models that can be used. (사용 가능한 모델들을 알려줘)
- A2. You can use the plastic bottle label classification model and the glass bottle iron lid classification model.

- Q3. Change it to a pet bottle model. (페트병 모델로 바꾸려면 어떻게 말해야 해?)
- A3. I will change to the PET bottle label classification model.

- Q4. Change it to a glass bottle model. (유리병 모델로 바꾸려면 어떻게 말해야 해?)
- A4. change glass bottle iron lid classification model

- Q5. Let the lane work. (레인 작동 하려면 어떻게 해야해?)
- A5. running lane

- Q6. Stop the lane. (레인 정지 하려면 어떻게 해야해?)
- A6. Stop lane