

Group 42

# Face Recognition to Play music

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# Inspiration

- Have no idea to choose which song
- Machine learning on Stm32 sounds cool



# Objective

- Snapshot the picture took from camera
- Input the image and verify it by network
- Play a song according to some feature (emotion, age, gender, hair, etc.)

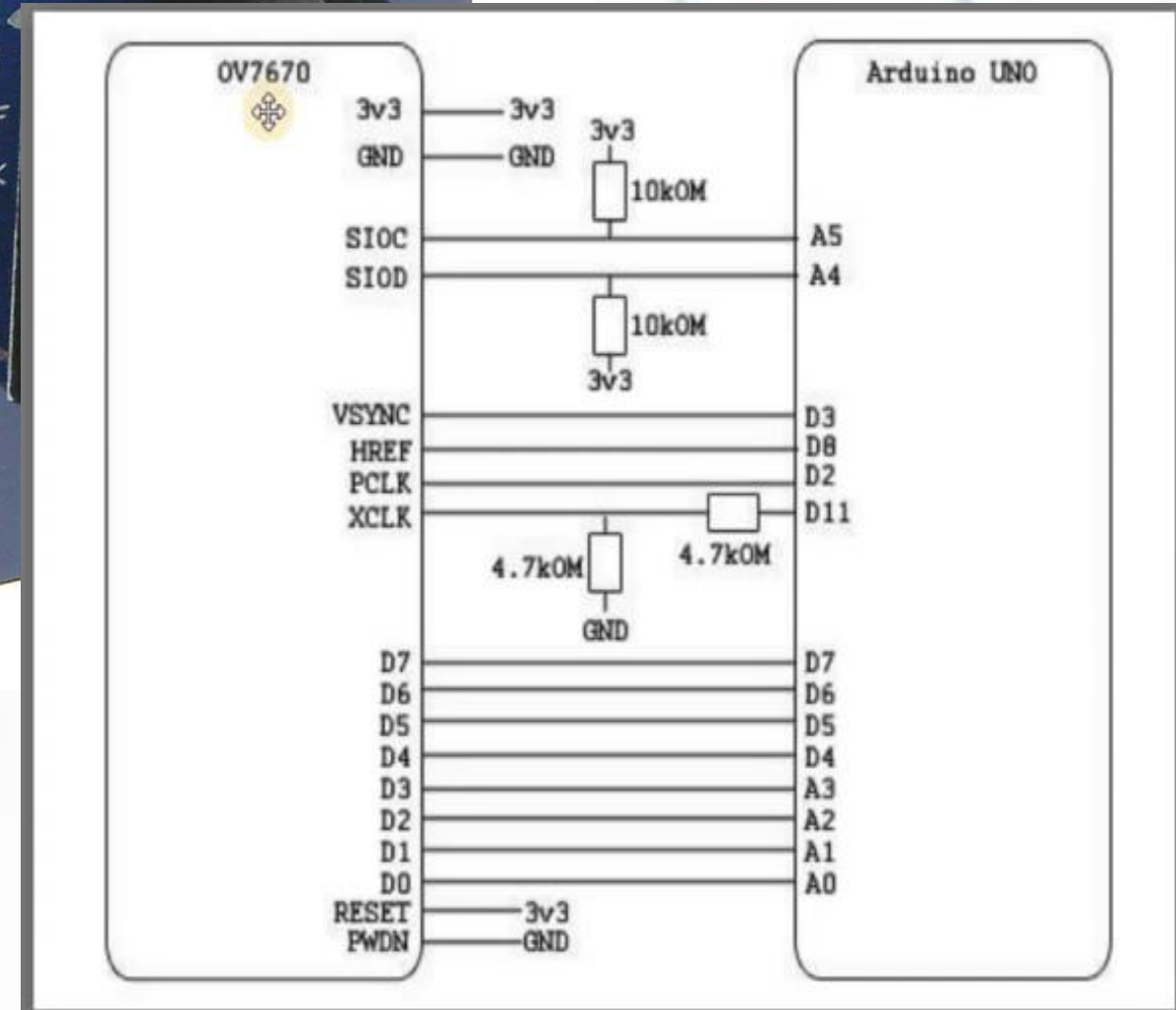
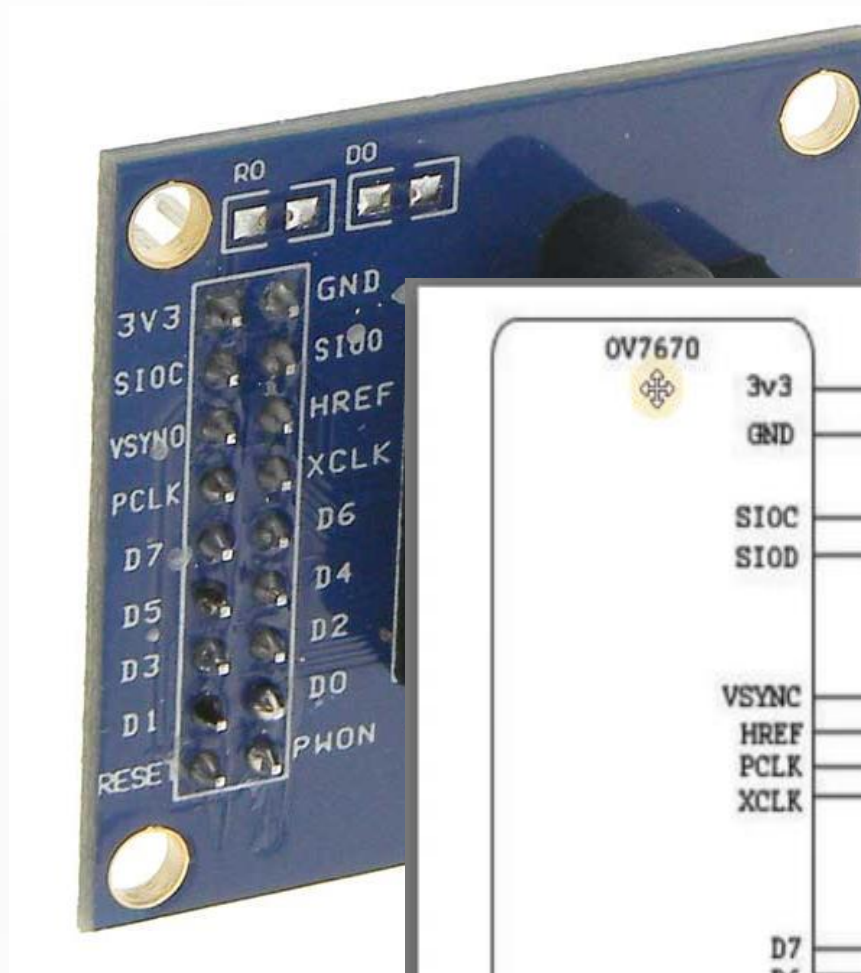
# Requirement

## Hardware

- STM32L4-L476RG
- OV7670: Camera (300\$)

## Software

- Arduino
  - X-CUBE-AI
    - Pre-trained Neural Network
    - Support Keras, TensorFlow
- User interface (Maybe)



# Problem might encounter

- How to load and pass image?
- Where does the data come from?
- How to train? Which model to use?
- How many classes?
- How to choose suitable song?

