**Recognizing faces using development board**

I think you may have seen some wonderful movies in your childhood, which shows that machines are often used to recognize faces. Today, surprisingly, face recognition technology is mature enough to meet our daily needs. Now, you also have the opportunity to implement this machine yourself. In this project, programmers are required to design a face recognition security system based on the development board (provided by us) and OpenCV. You need to use a camera on the development board to capture faces. Then, you need to transfer the picture to a server and recognize the image. Finally, you need to make the machine react to the recognition results. The implementation details are as follows:

1) Use infrared sensors of development board to trigger the camera to take pictures. (10 points)

2) Use WIFI module of development board to transmit the picture to a server. (10 points)

3) In server, a program implemented by yourself is used to receive the picture and a matching algorithm from API in OpenCV is used to match it to the pictures in a dataset containing more than 10 photos. (20 points)

4) If the face picture matches any photos in the dataset, you should transmit ‘success’ message to development board and brighten up LED module with a green light. (20 points)

5) If the face picture cannot match anyone in the dataset, you should transmit ‘fail’ message to development board and brighten up LED module with a red light. (10 points)

6) Create a database containing the name of the persons who took the photo and their attendance times. (10 points)

7) If the person is in the database, his attendance times will be increased by 1; if he is not in the database, then add the person’s information in the database and initialize his attendance time to 1. (20 points)