project report

Project Introduction

- The project is divided into four modules
- The first module YuNet.cpp load the YuNet class, and we will load the trained YuNet model
- The second module config.cpp are some constants in the project
- The third module util.cpp some of the functions in the project
- In the main method module main.cpp, we will call the above three modules and write the call logic

Dependency libraries

- This project mainly calls opencv4.10.0

Function introduction

- This project contains a total of four functions, using '-mode' in the parameters to achieve function switching, and the mode can be switched in real time at runtime.
    - Normal Face Detection: Normal Mode (Button n)
    - Blur Processing: Blur Mode (Button b)
    - Pixelation: Pixel mode (button p)
    - Mask mode: Mask mode (button m)
- Parameter adjustments
    - Blurring:
        - Reduce Blur: Press button c
        - Increase Blur: press button v
    - Pixelation:
        - To reduce the pixel block size: press button c
        - To induce the pixel block size: press buttonv
    - mask：
        - After pressing the U button, the input is displayed in the command line, and the covered photo can be changed by entering the legal photo path

Running instructions

Command-line arguments

- -mode: set the initial mode(normal, blur, pixel, mask), default is mask
- -blur_kernel_size: takes effect only in blur mode. Set the initial blur kernel size, the default value is 5*5

- -pixel_size: Takes effect only in pixel mode. Sets the initial pixel block size, the default value is 10
- -mask: takes effect only in mask mode. Specify the path of the mask image, and the default image name is mask1.jpg.
- -device: specifies the device ID of the camera, which is 0 by default

Run the sample

1. Default parameters

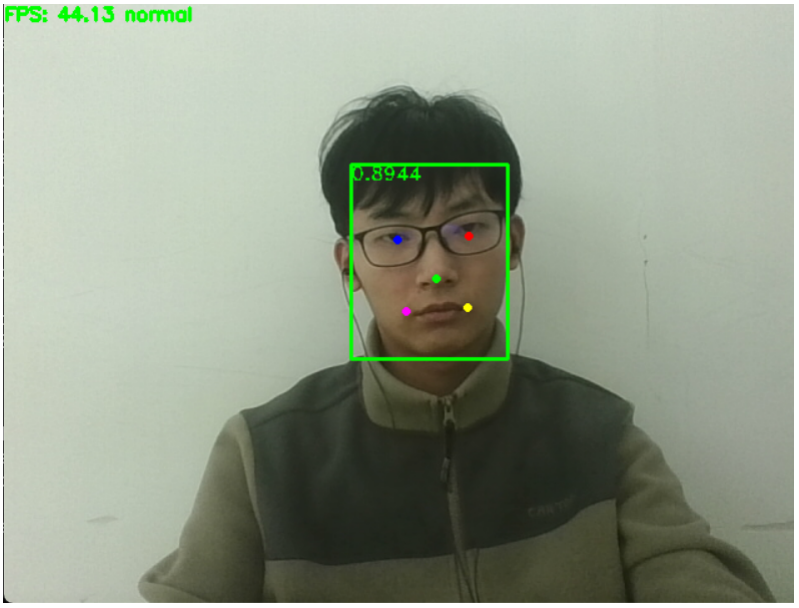
```
./main
```

2. Specify the parameter to run

```
./main -mode mask -mask /path/to/image.png
./main -mode normal -mask /path/to/image.png
./main -mode blur -mask /path/to/image.png -blur_kernel_size 5
./main -mode pixel -mask /path/to/image.png -pixel_size 10
```

Running results

1. normal



2. blur

3. pixel

4. mask