BEST PHOTO RECOGNITION GUIDELINES

IPSS (IntelliPass Screening System)

Aug, 2020
Version 1.1

intelliPass
Screening System
Version 1.1

Revision History

Rev.	Date	Prepared By	Description of Document
0.1	08/31/2020	Asim Khan	Photo Guidelines Document

Please choose a photo without hat for the past three months, the head is clear, and with even lighting;
Solid background with no other objects in visible in the back.
The pixels of the face frame are a minimum 90, and the angle of face deflection is less than 15 degrees.
The face needs to account for more than 1/3 of the photo to avoid blurry photos or wearing sunglasses or excessive beauty or head rotation.
It shall be under normal daylight (normal indoor light);
The recommended size is 640 pixel * 480 pixel, and the size should not exceed 500kb.
Currently, only two file formats, .jpg and .png, are supported.

Photo Features

Face fills more then 1/3 of the total area
Person facing front
No headgear, eye glasses etc.
Solid light or dark gray background.

Sample Photos

Important Notes on Facial Recognition.

The high rate of success and accuracy in the Facial recognition is dependent on good quality photo taken by camera or digital image uploaded. The conditions provided above will ensure good facial identification results. However due to several factors that affect the quality of picture used for training, the facial recognition systems can achieve high accuracy up to 98%, higher rates are possible under controlled conditions. However, if good quality photos of headshots are not used, the accuracy can drop to mid-80s and lower 90s. It is absolutely important to take care and ensure good quality photos for training the system. IPSS –Terminal employs highly sophisticated Neural Network algorithms to do highly accurate facial recognition and in most situation it will be able to recognize subjects on the fringes of the quality. (Improper lights, face angle towards the camera, back lighting, blurring to some extent) if only the initial photo being used to train is high quality.

There are high quality standards in place for photos for driving license, National ID cards and passports. These well-established standards could be followed to get good quality results.

2x2 Passport photos under controlled conditions as good standard to follow

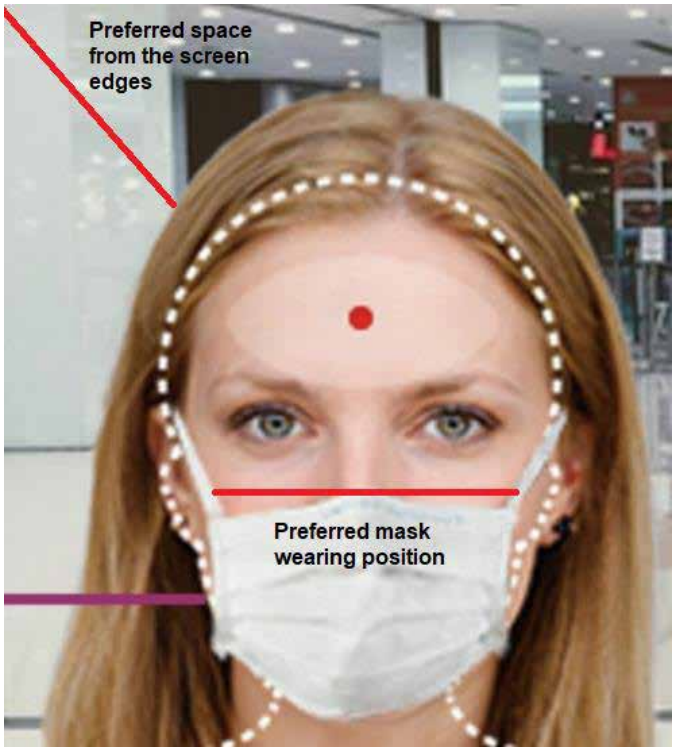
Please see a good article on Accuracy of facial recognition (please copy the link)
https://www.csis.org/blogs/technology-policy-blog/how-accurate-are-facial-recognition- systems-and-why-does-it-matter

Scan Guidelines for Best Results

There are some precautions we recommend to avoid any issues with person identification:

1. While scanning, the mask should not cover the full nose of the person.
2. While scanning, the mask should not cover the eyes or glasses (if wearing) of the person.
3. Glasses can distract with glare and possibly cause disturbance in identifying person.
4. Face should be at least at the distance of **0.5 m or 1.5 ft** from the IPSS terminal.
5. When a person is too close to the IPSS terminal, the light covers most of the face which can cause **glare on the glasses** and face blurring which adversely effects the identification.

For reference a sample bad scan (left) and a good scan (right) with improper and proper wearing of mask.



Following are some samples of scans covering most of the requirements for best results:

More on the scan guidelines, following are some sample cases, which may cause an issue during person identification process:

It is also worth mentioning that the pictures used as training data should not contain the following:

1. Smiling face.
2. Wearing glasses
3. Fancy hairstyles especially when the forehead is covered.
4. Makeup