MLFW Files to PyTorch Ready Data

The WWMR data has been filtered down to square images of faces of the target shape already.

Imports and info

In [1]:
```
import numpy as np
from PIL import Image
import matplotlib.pyplot as plt
import os
```

In [2]:
```
# text document containing list of image files with masks
masks_list_fp = r'D:\data\face_mask\MLFW\mask_list.txt'

img_dir = r'D:\data\face_mask\MLFW\MLFW\aligned'
```

Load images as np arrays

First, we need to read the names of the images that have masks.

In [3]:
```
masks_file = open(masks_list_fp, 'r')

masks_img_names = masks_file.readlines()

# strip newlines
masks_img_names = [file_name.strip() for file_name in masks_img_names]
```

In [4]:
```
label_list = []
img_list = []

for root, subdirectories, files in os.walk(img_dir):
    for f in files:

        # determine label
        if f in masks_img_names:
            label_list.append(1)
        else:
            label_list.append(0)

        # load image
        im_fp = os.path.join(img_dir, f)
        im = Image.open(im_fp)
        im_arr = np.array(im)
        img_list.append(im_arr)
```

In [5]:
```
MLFW_X = np.array(img_list)
MLFW_y = np.array(label_list)
```

In [7]:
```
MLFW_X.shape
```

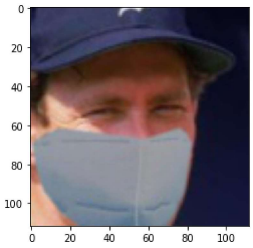
Out[7]:
```
(12000, 112, 112, 3)
```

In [8]:
```
MLFW_y.shape
```

Out[8]:
```
(12000,)
```

In [9]:
```
plt.imshow(MLFW_X[200])
```

Out[9]:
```
<matplotlib.image.AxesImage at 0x1e0040488c8>
```



In [10]:
```
out_x = r'D:\data\face_mask\MLFW\MLFW_X'
out_y = r'D:\data\face_mask\MLFW\MLFW_y'

np.save(out_x, MLFW_X)
np.save(out_y, MLFW_y)
```