Presentation

February 7, 2021

[56]:
```
import os
import pandas as pd
```

Given below are the categories taken from the data source for a greater idea of what is in the database

[3]:
```
print(label_dict)
print(categories)
print(labels)
```

```
{'uncovered': 0, 'incorrect': 1, 'covered': 2}
['uncovered', 'incorrect', 'covered']
[0, 1, 2]
```

1 Ideals of predicting if mask being worn

The below cell gives us an idea of what is truly representative of the images in the files. A database has been created to get a deeper insight into the dataset and its representative images. We can tell through the given information below,, what are important features needed for an image to be considered based on the representative features on the mask,mouth, chin and nose.

[52]:
```
sample_dct = parse_features(os.listdir(data_path_2)[:15])
sample_dct
```

[52]:
```
[defaultdict(bool, {'id': '25159', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '24951', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '36487', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '28178', 'Mask': True, 'Nose': True, 'Mouth': True}),
 defaultdict(bool, {'id': '31438', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '36320', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '21934', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '22939', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '23131', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '34409', 'Mask': True, 'Nose': True, 'Mouth': True}),
 defaultdict(bool, {'id': '32392', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '21922', 'Mask': True, 'Chin': True}),
 defaultdict(bool, {'id': '32435', 'Mask': True, 'Mouth': True, 'Chin': True}),
 defaultdict(bool, {'id': '30348', 'Mask': True, 'Mouth': True, 'Chin': True}),
```

```
 defaultdict(bool, {'id': '23696', 'Mask': True, 'Mouth': True, 'Chin': True})]
```

[54]:
```
df = pd.DataFrame(sample_dct)
df.head()
```

[54]:

	id	Mask	Mouth	Chin	Nose
0	25159	True	True	True	NaN
1	24951	True	True	True	NaN
2	36487	True	True	True	NaN
3	28178	True	True	NaN	True
4	31438	True	True	True	NaN

[55]:
```
df.fillna(False)
```

[55]:

	id	Mask	Mouth	Chin	Nose
0	25159	True	True	True	False
1	24951	True	True	True	False
2	36487	True	True	True	False
3	28178	True	True	False	True
4	31438	True	True	True	False
5	36320	True	True	True	False
6	21934	True	True	True	False
7	22939	True	True	True	False
8	23131	True	True	True	False
9	34409	True	True	False	True
10	32392	True	True	True	False
11	21922	True	False	True	False
12	32435	True	True	True	False
13	30348	True	True	True	False
14	23696	True	True	True	False

[9]:
```
mask_image = Image.open(covered_path)
```

[10]:
```
mask_image
```

[10]:

[14]:
```
incorrect_path = '/datasets/MaskedFace-Net/train/incorrect/29943_Mask_Chin.jpg'
```

[15]:
```
unmask_image = Image.open(incorrect_path)
```

[16]:
```
unmask_image
```

[16]:

Here is an idea of the kind of images shown in our database so far. They represent if masks are being worn properly

This is just a basic look as to what our model will look at to try and predict if the person is wearing a mask properly or not.

[ ]: