

LAMPIRAN

LAMPIRAN 1 : SKRIP PROGRAM

a. Fungsi Resize

```

srcFiles = dir('D:\DataTA\FotoTAawal\1.Joy\*.jpg'); % the folder in which ur
images exists
for i = 1 : length(srcFiles)
filename = strcat ('D:\DataTA\FotoTAawal\1.Joy\',srcFiles(i).name);
im = imread(filename);
k=imresize(im,[256,256]);
newfilename=strcat('D:\DataTA\FotoTAresize\Joy\',srcFiles(i).name);
imwrite(k,newfilename,'jpg');
end

```

b. Fungsi Curvelet Transform

```

function CT = get_CT(imgsize,imagefiles)
nfiles = length(imagefiles);
tic;
for ii=1:nfiles

imageGray=rgb2gray(imread(join([imagefiles(ii).folder,'\',imagefiles(ii).na
me])));%konvert grayscale
curva{ii} = fdct_usfft(imageGray,0);
end
toc;
CT.curva=curva;
end

```

c. Fungsi Ekstraksi Ciri

```

function FE =get_FE(curva,level,method)
    nfiles = length(curva);

    for ii=1:nfiles
        if strcmp(method,'curva') || strcmp(method,'param')
            if level==1 || level==length(curva{1, 1})
                get_Mean(ii) = mean(mean(curva{1, ii}{1, level}{1, 1}));
                get_Energy(ii) =calEnergy(curva{1, ii}{1, level}{1, 1});
                get_str_dv(ii) = mean(std(curva{1, ii}{1, level}{1, 1}));
                get_entropy(ii) = mean(EntropyManual(curva{1, ii}{1, level}{1, 1}));
            else
                count1 = length(curva{1, 1}{1, level});
                for iii=1:count1
                    g_Mean(iii) = mean(mean(curva{1, ii}{1, level}{1, iii}));
                    g_Energy(iii) =calEnergy(curva{1, ii}{1, level}{1, iii});
                    g_str_dv(iii) = mean(std(curva{1, ii}{1, level}{1, iii}));
                    g_entropy(iii) = mean(EntropyManual(curva{1, ii}{1, level}{1, iii}));
                end
                get_Mean(ii) = mean(g_Mean);
                get_Energy(ii) = mean(g_Energy(:));
                get_str_dv(ii) = mean(g_str_dv);
                get_entropy(ii) = mean(g_entropy);
            end
            else %kofisen,frekuensi,spatial
                get_Mean(ii) = mean(mean(curva{1, ii}));
                get_Energy(ii) =calEnergy(curva{1, ii});
                get_str_dv(ii) = mean(std(curva{1, ii}));
                get_entropy(ii) = mean(EntropyManual(curva{1, ii}));
            end
        end
        FE.mean =get_Mean;

        FE.energy =get_Energy;
        FE.entropy = get_entropy;
        FE.std =get_str_dv;
    end
end

```

d. Fungsi Data Latih (SVMtrain)

```

xmean = [FE_TrainingJO134_level1.mean FE_TrainingSA134_level1.mean];
xenergy = [FE_TrainingJO134_level1.energy FE_TrainingSA134_level1.energy];
xentropy = [FE_TrainingJO134_level1.entropy FE_TrainingSA134_level1.entropy];
xstd = [FE_TrainingJO134_level1.std FE_TrainingSA134_level1.std];

```

```

x = [xmean; xenergy; xentropy; xstd]

```

```

[m,n] = size(FE_TrainingJO134_level1.mean);
yjoyTraining134 = cell(1,n);
yjoyTraining134(:) = {'JoyTraining134'};

```

```

[m,n] = size(FE_TrainingSA134_level1.mean);
ysadTraining134 = cell(1,n);

```

```
ysadTraining134(:) = {'SadTraining134'};
```

```
y = [yjoyTraining134 ysadTraining134 ]
```

```
xreal = real(x)
```

```
x = transpose(xreal)
```

```
y = transpose(y)
```

```
Mdl = fitcecoc(x,y) %untuk training
```

e. Fungsi Pengujian

```
get_UjiKlmpk2AN=dir('D:\.jpg');
```

```
CT_Uji2JO = get_CT([256 256],get_UjiKlmpk2JO);
```

```
FE_Uji2JO_lev1 = get_FE(CT_Uji2JO. curva, 1, 'curva');
```

```
xmean2 = [FE_Uji2JO_lev1.mean FE_Uji2SA_lev1.mean];
```

```
xenergy2 = [FE_Uji2JO_lev1.energy FE_Uji2SA_lev1.energy];
```

```
xentropy2 = [FE_Uji2JO_lev1.entropy FE_Uji2SA_lev1.entropy];
```

```
xstd2 = [FE_Uji2JO_lev1.std FE_Uji2SA_lev1.std];
```

```
x = [xmean2; xenergy2; xentropy2; xstd2]
```

```
%level 1
```

```
[m,n] = size(FE_Uji2JO_lev1.mean);
```

```
yjoyUji2 = cell(1,n);
```

```
yjoyUji2(:) = {'JoyUji2'};
```

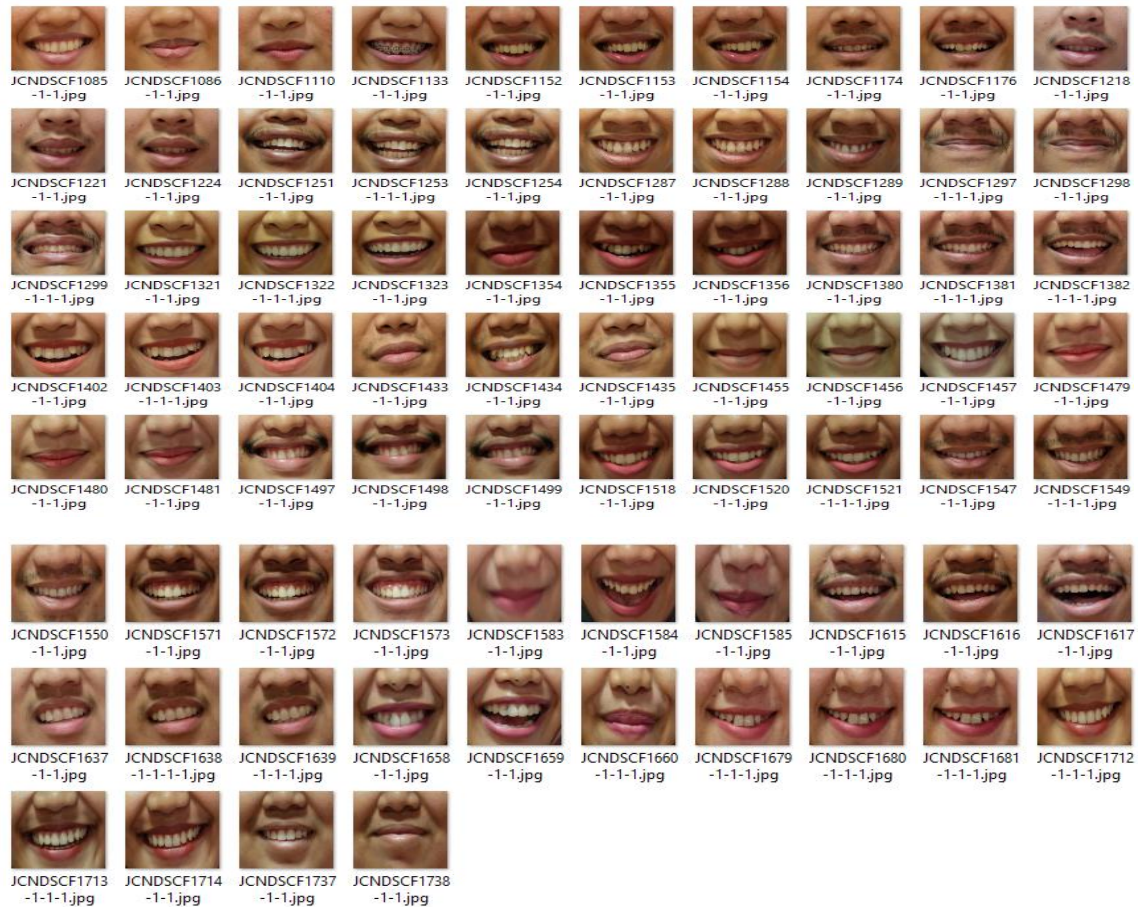
```
[m,n] = size(FE_Uji2SA_lev1.mean);
```

```
ysadUji2 = cell(1,n);  
ysadUji2(:) = {'SadUji2'};  
  
y = [yjoyUji2 ysadUji2 ]  
  
xreal = real(x)  
x = transpose(xreal)  
y = transpose(y)  
  
Mdl = fitcecoc(x,y) %untuk training  
  
a = predict(Mdl, x) %untuk testing  
  
tf = strcmp(y,a); %untuk melihat akurasi
```

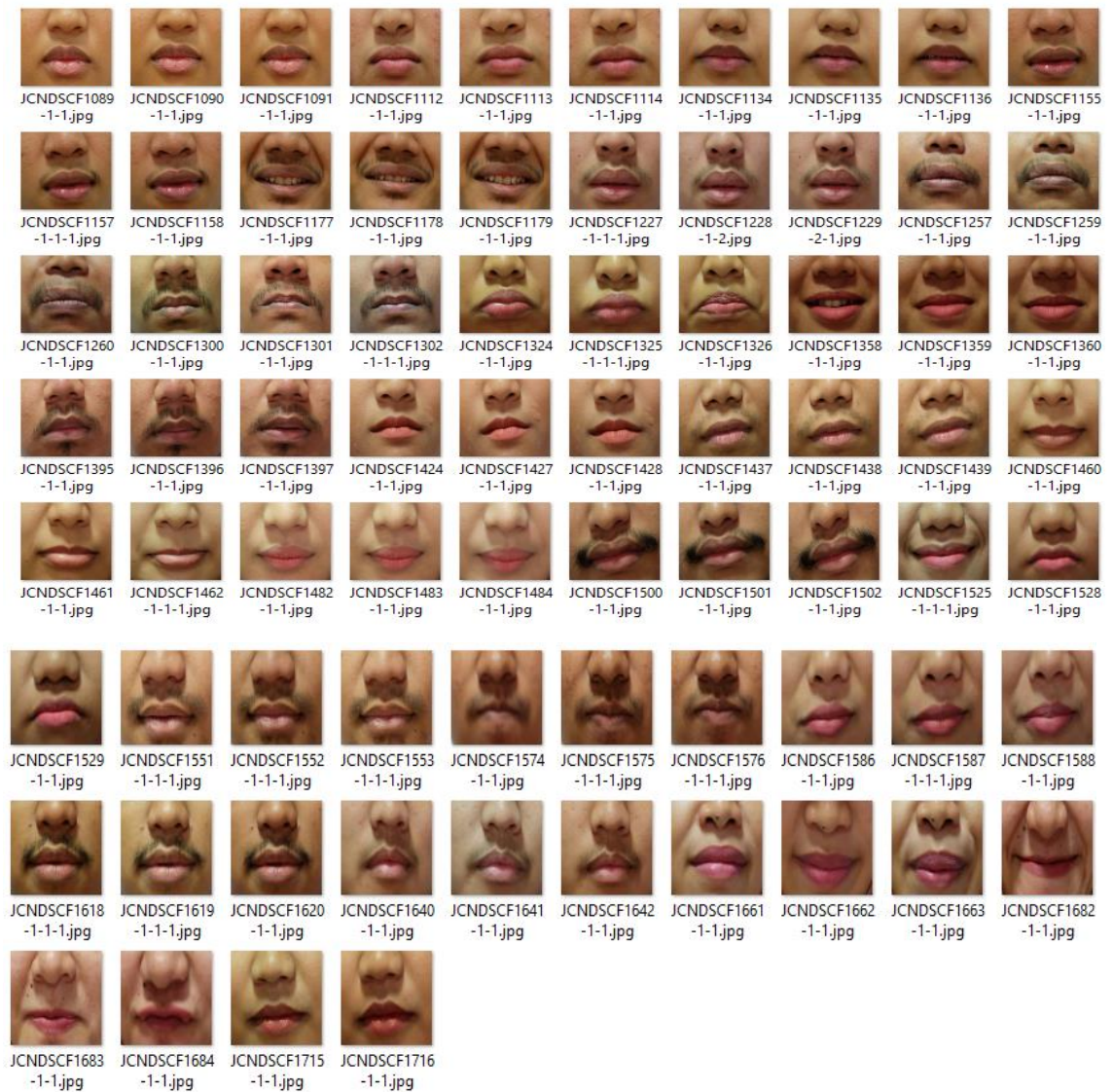
LAMPIRAN 2 : CITRA UJI DAN CITRA LATIH

a. Citra *fold-1*

Citra Ekspresi Senang

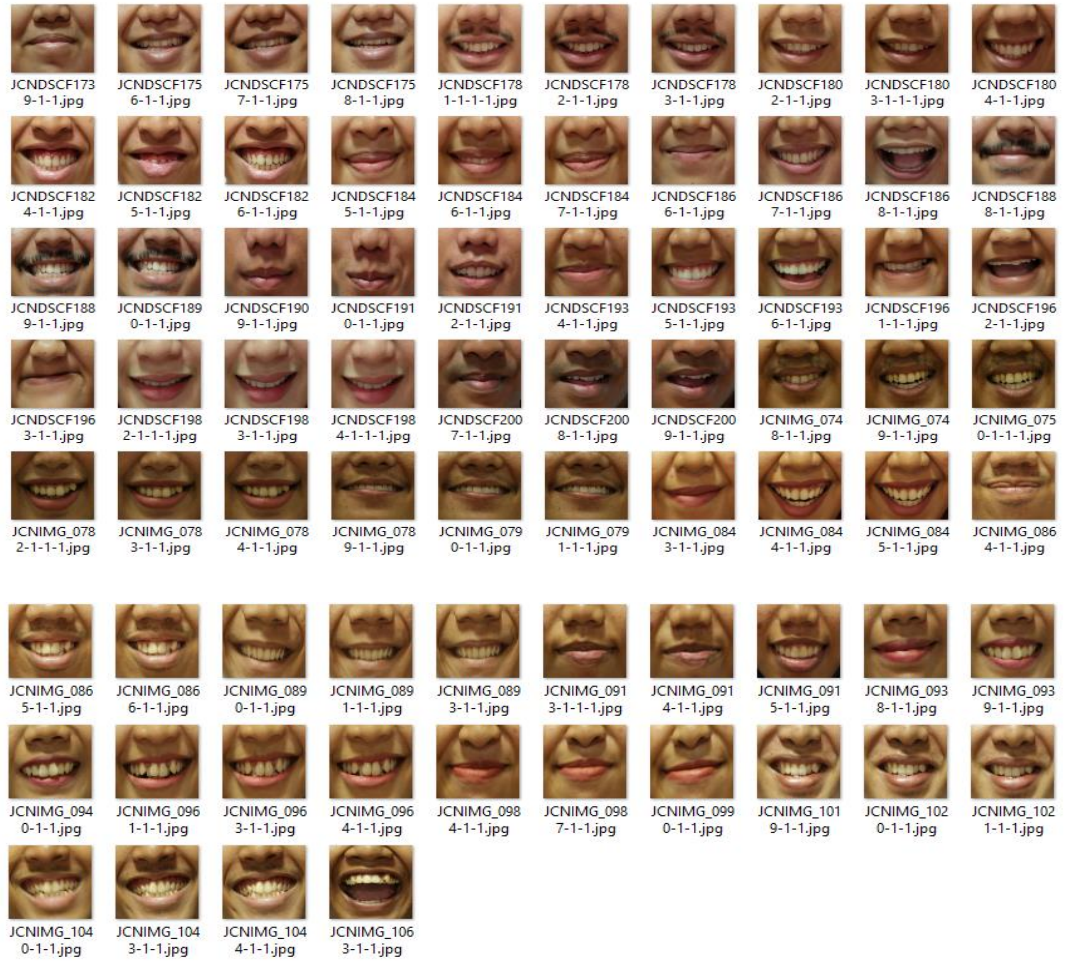


Citra Ekspresi Sedih

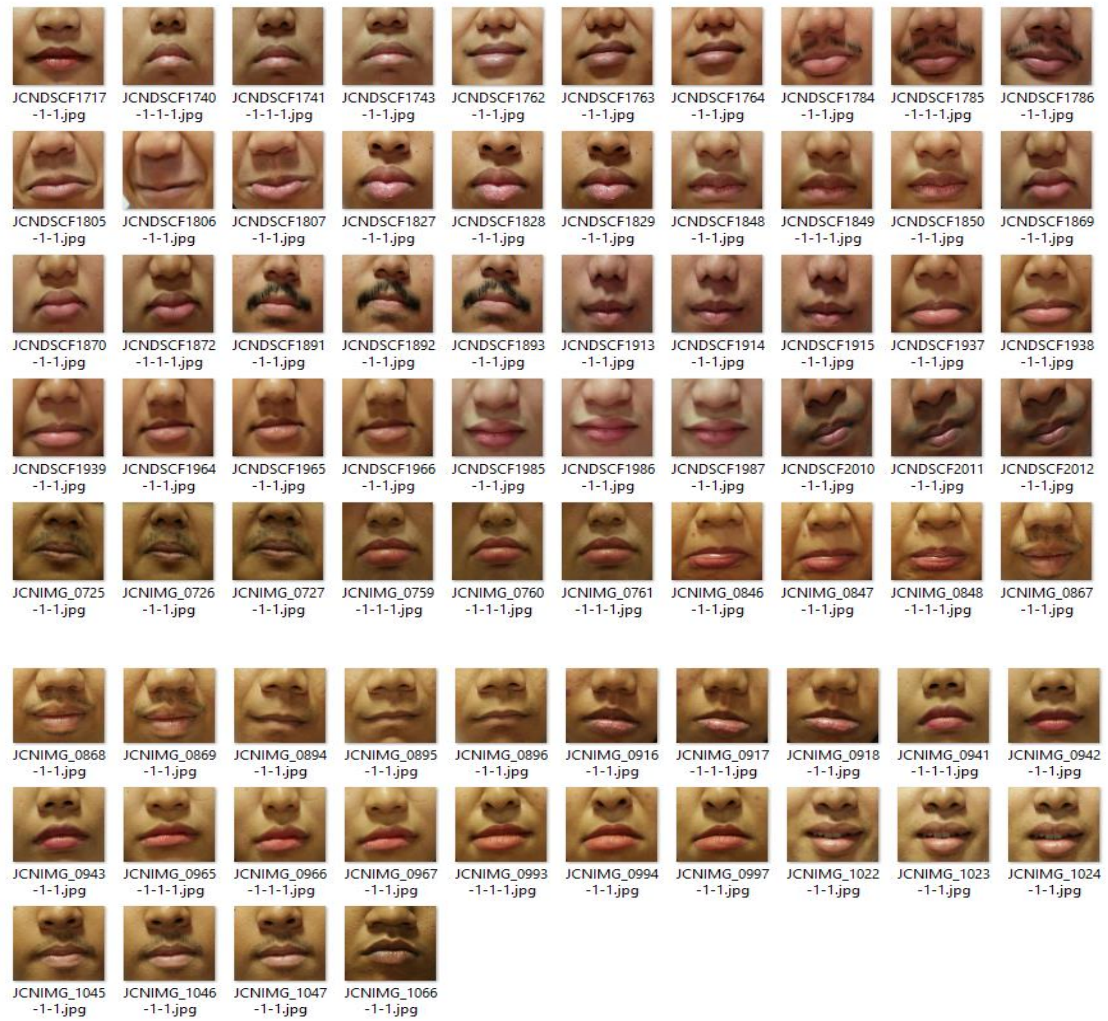


b. Citra *fold-2*

Citra Ekspresi Senang

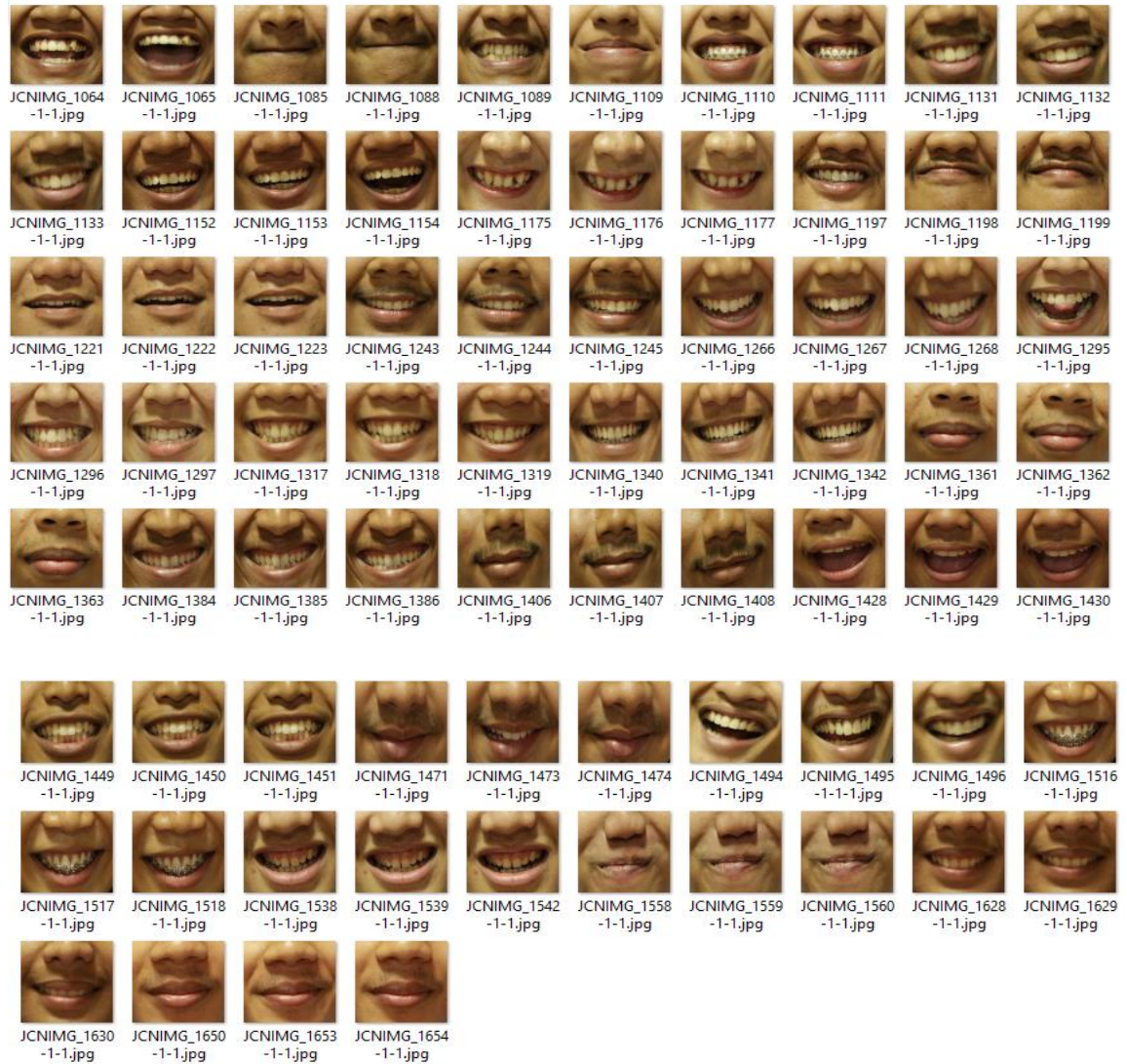


Citra Ekspresi Sedih

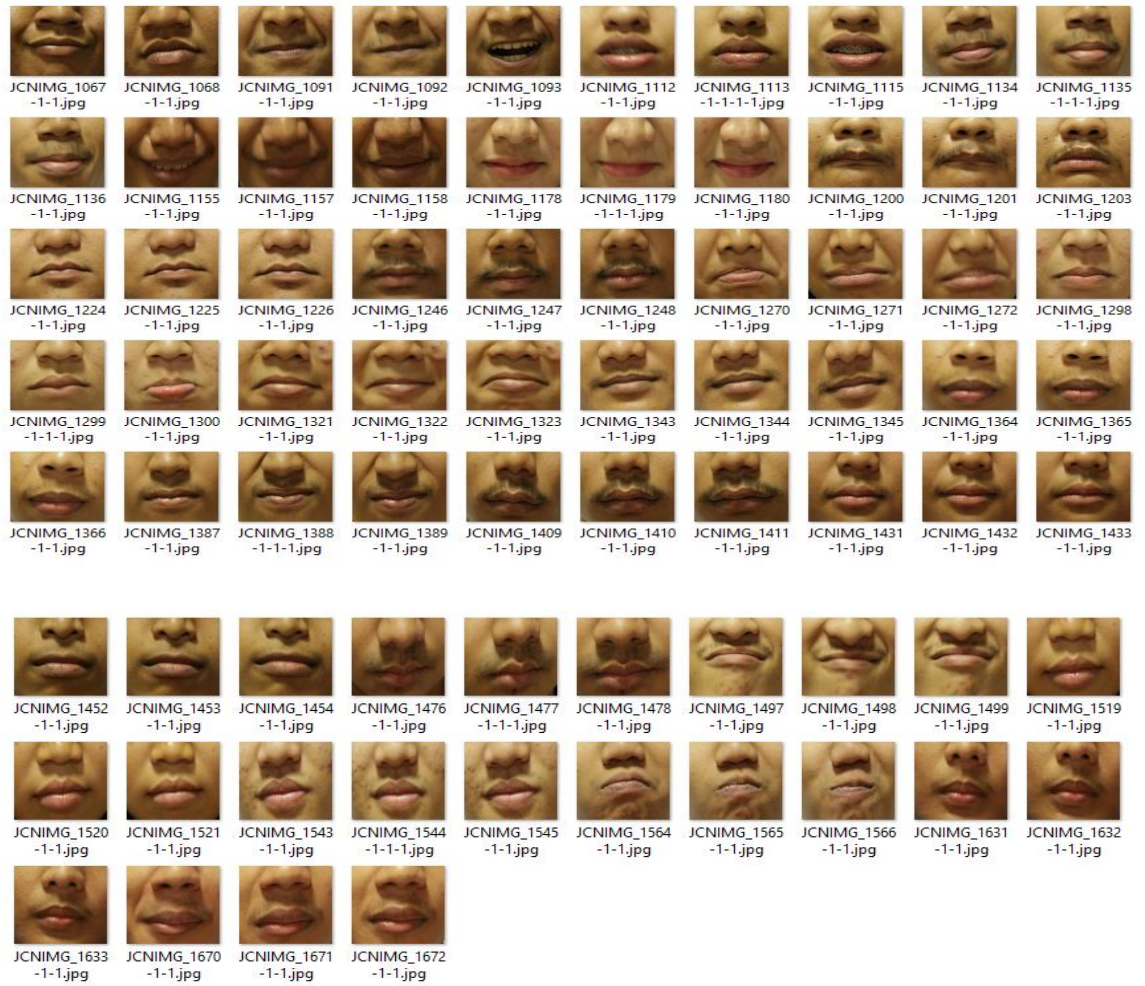


c. Citra *fold-3*

Citra Ekspresi Senang

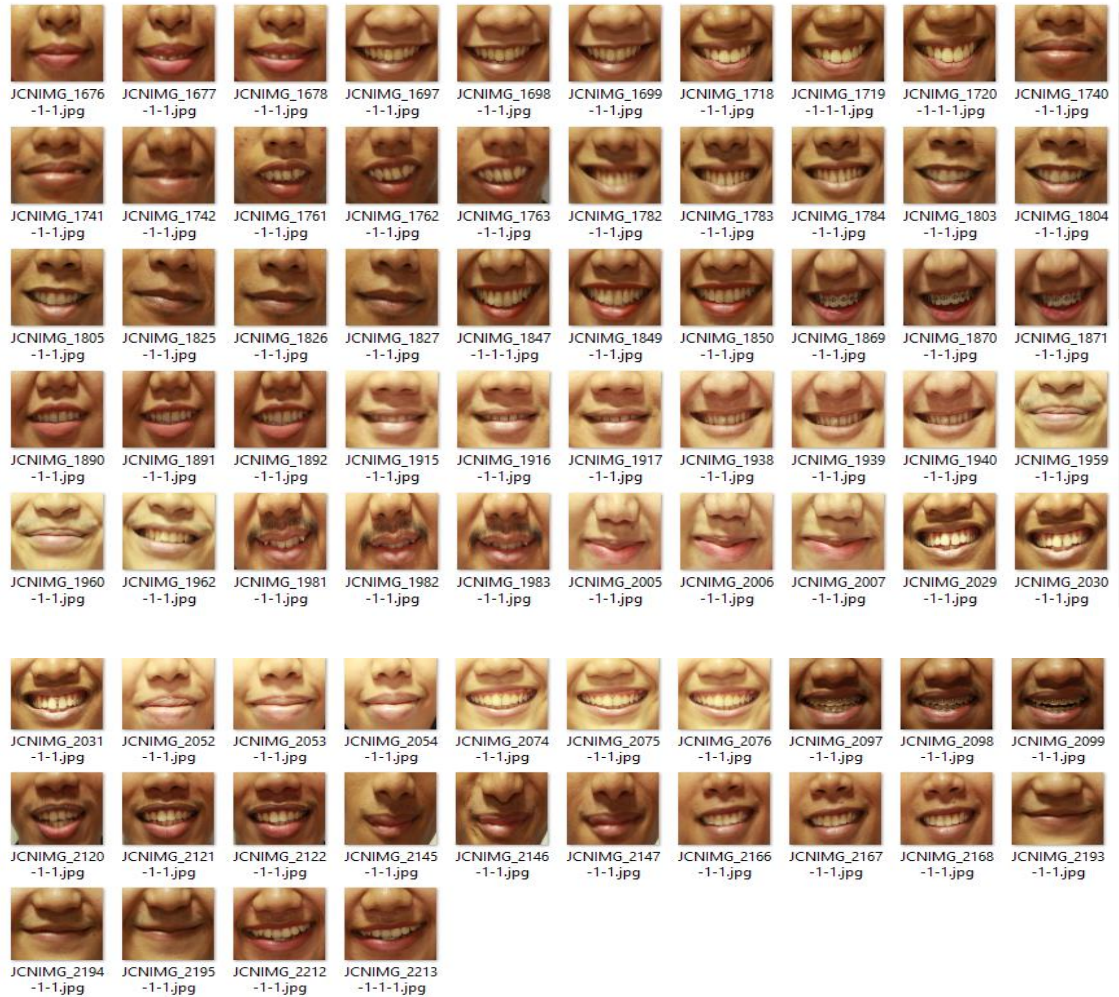


Citra Ekspresi Sedih



d. Citra *fold-4*

Citra Ekspresi Senang



Citra Ekspresi Sedih

