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```
clc
close all
clear
```

Control Variables

```
Train = 1; % Put 0 if you want to use your own Matrix for testing
```

Variables For Training

```
URL = './yalefaces/';
samplesofEachPersonForTraining = 5; % total Samples to Train Your SVM
totalPerson = 5; % total Subjects to be trained in SVM
positiveSubjectNumber=3; % Select subject Number you want to identified in SVM as
```

Variables For Testing

```
samplesofEachPersonForTesting = 9; %
compressRate = 1; % between 0 and 1
TestSubjectNumber = 1:4; % for observing results for different Subjects
SVMTestDataMatrixName = 'PCA SVM-TotalSamples4-C0.01.mat'; % if Train is equal to
PCAMatrixName = 'lbp PCATrained totalperson 5 samplesPerPerson10.mat'; % if Train
```

Variables For Both Testing And Controlling

```
featureSpec = 'lbp'; %% defines your feature space
TrainingAndTestingMethod = 'SVM' %% for selecting Testing OR Training Method Put '
```

```
TrainingAndTestingMethod =
```

```
SVM
```

Training & Testing

```
if (Train == 1)
% Training and Test
    if (TrainingAndTestingMethod == 'SVM')
```

```

        filename = TrainingPCA_SVM_MainFunction(URL,samplesofEachPersonForTraining,
        for i=TestSubjectNumber
            TestPCA_SVMFunction(filename,samplesofEachPersonForTesting,i);
        end
    else
        [filename, p,q,r] = PCAFunction(URL,totalPerson,samplesofEachPersonForTesti

        for i= TestSubjectNumber
            PCATestFunctionLast(filename,samplesofEachPersonForTesting,i);
        end
    end
end
else

```

Testing Only

```

if(TrainingAndTestingMethod == 'SVM')
    TestPCA_SVMFunction(SVMTestDataMatrixName,samplesofEachPersonForTesting,2)
else
    for i= TestSubjectNumber
        PCATestFunctionLast(PCAMatrixName,samplesofEachPersonForTesting,i);
    end
end
end
end

```

<i>Iter</i>	<i>f(x)</i>	<i>Feasibility</i>	<i>First-order optimality</i>	<i>Total relative error</i>
0	1.275000e+01	5.238e+07	6.829e+08	6.829e+08
1	5.618805e+03	5.895e+04	7.686e+05	7.798e+05
2	1.080346e+04	0.000e+00	5.292e+05	5.446e+05
3	1.295696e+04	0.000e+00	3.308e+05	3.473e+05
4	5.368039e+03	0.000e+00	6.351e+04	7.099e+04
5	2.540697e+03	0.000e+00	1.421e+04	1.772e+04
6	1.284483e+03	0.000e+00	6.088e+03	7.794e+03
7	3.157433e+02	0.000e+00	9.346e+02	1.383e+03
8	7.488987e+01	0.000e+00	1.231e+02	2.360e+02
9	7.194143e+00	0.000e+00	2.000e-04	1.392e+01
10	1.062280e+00	0.000e+00	7.848e-05	2.026e+00
11	1.518168e-01	0.000e+00	1.091e-05	2.900e-01
12	2.176277e-02	0.000e+00	1.569e-06	4.156e-02
13	3.118784e-03	0.000e+00	2.247e-07	5.957e-03
14	4.469638e-04	0.000e+00	3.221e-08	8.536e-04
15	6.405867e-05	0.000e+00	4.615e-09	1.223e-04

Minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the function tolerance and constraints are satisfied to within the default value of the constrain

Person did not match The Target



Person did not match The Target



Person did not match The Target



Person did not match The Target



Person did not match The Target



Person did not match The Target



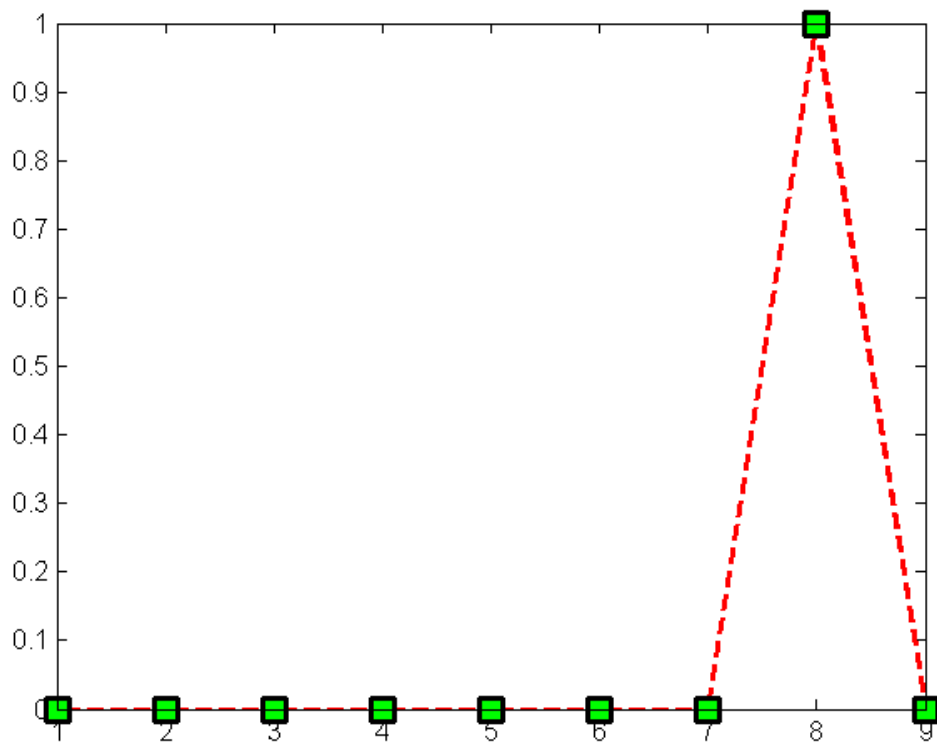
Person did not match The Target



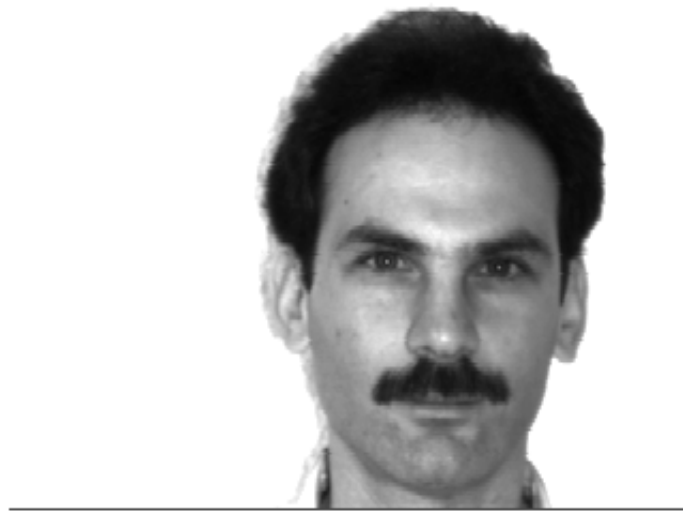
Person matched The Target



Person did not match The Target



Person did not match The Target



Person did not match The Target



Person did not match The Target



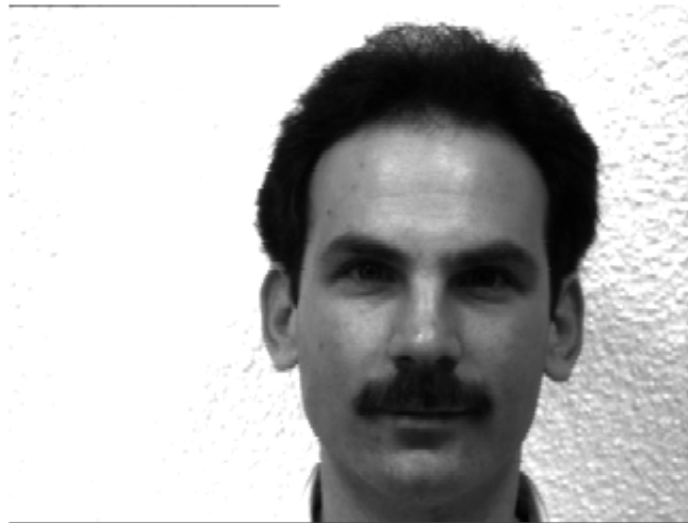
Person did not match The Target



Person did not match The Target



Person did not match The Target



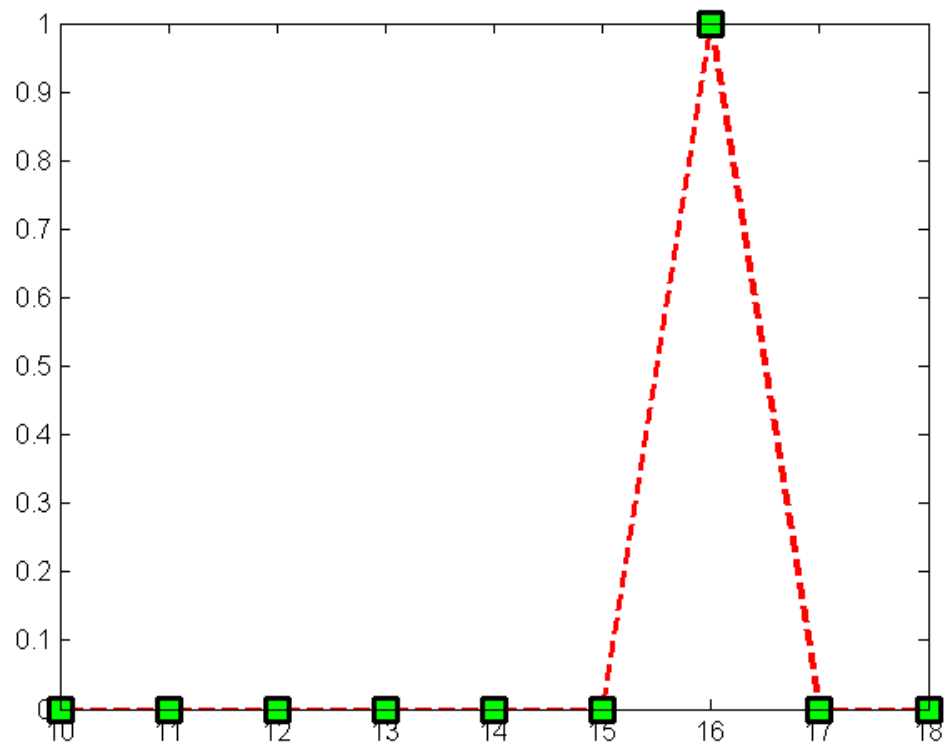
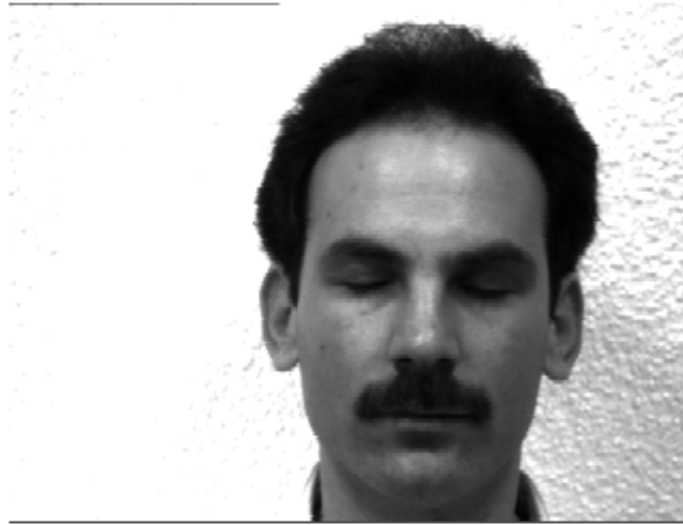
Person matched The Target



Person did not match The Target



Person did not match The Target



Person matched The Target



Person matched The Target



Person matched The Target



Person matched The Target



Person matched The Target



Person matched The Target



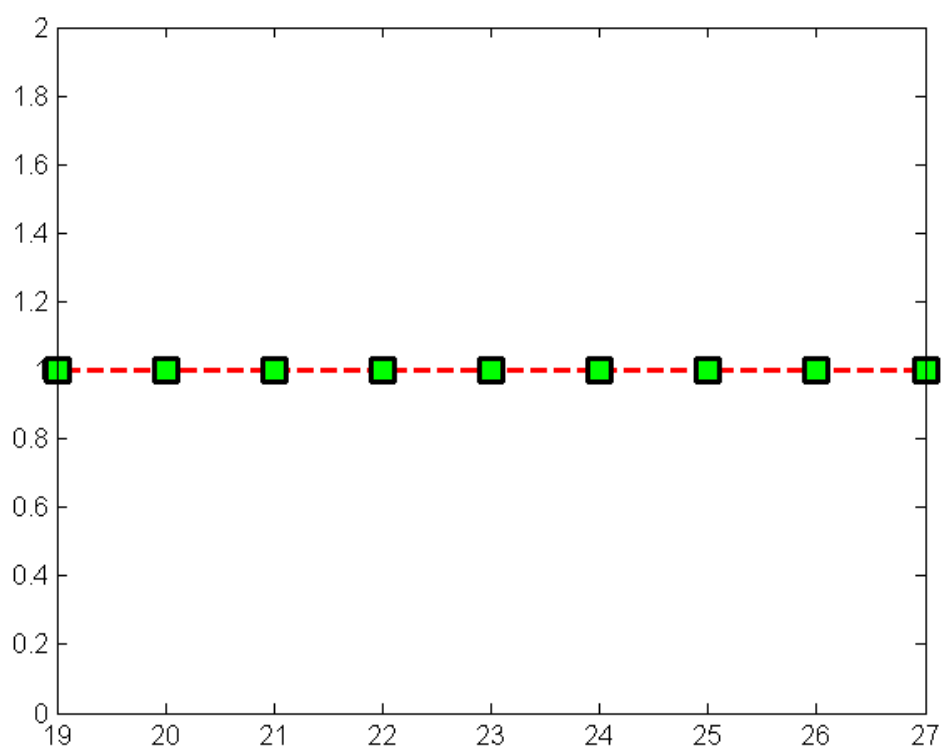
Person matched The Target



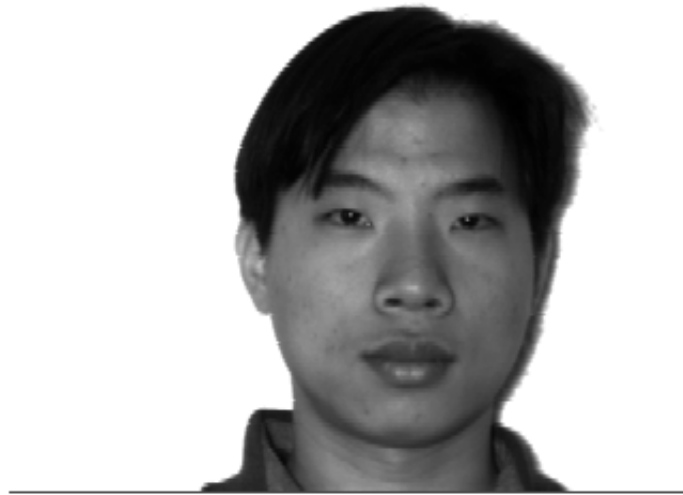
Person matched The Target



Person matched The Target



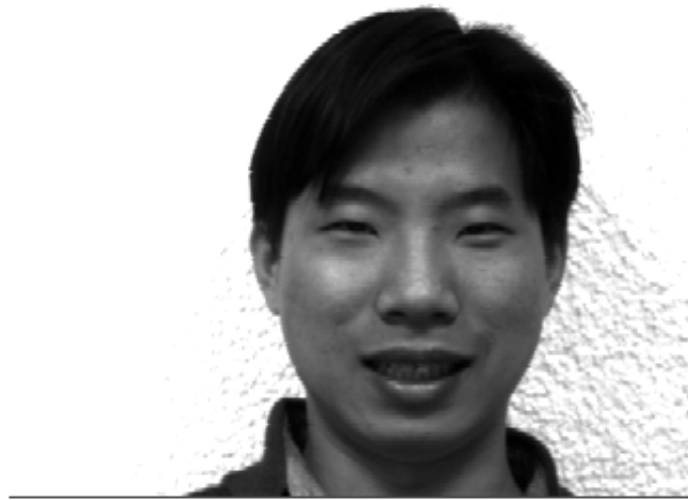
Person did not match The Target



Person did not match The Target



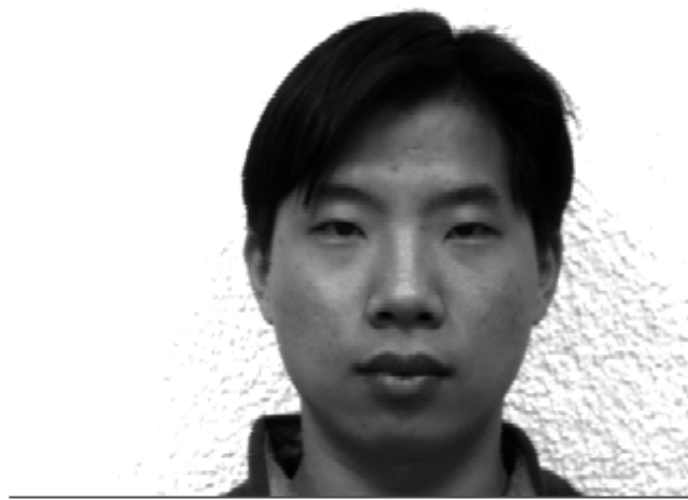
Person did not match The Target



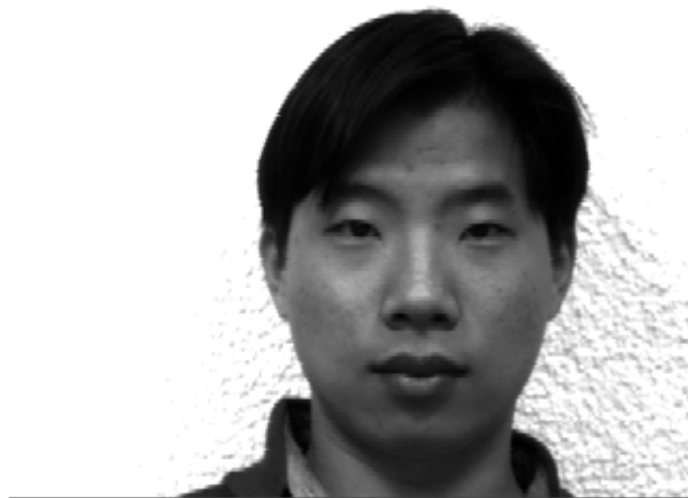
Person did not match The Target



Person did not match The Target



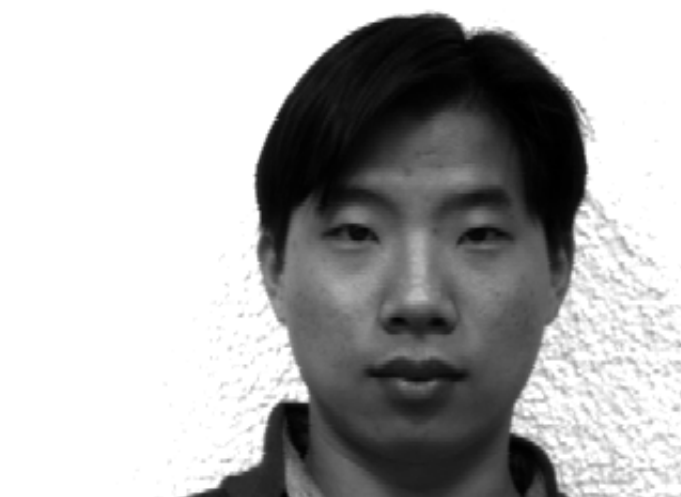
Person did not match The Target



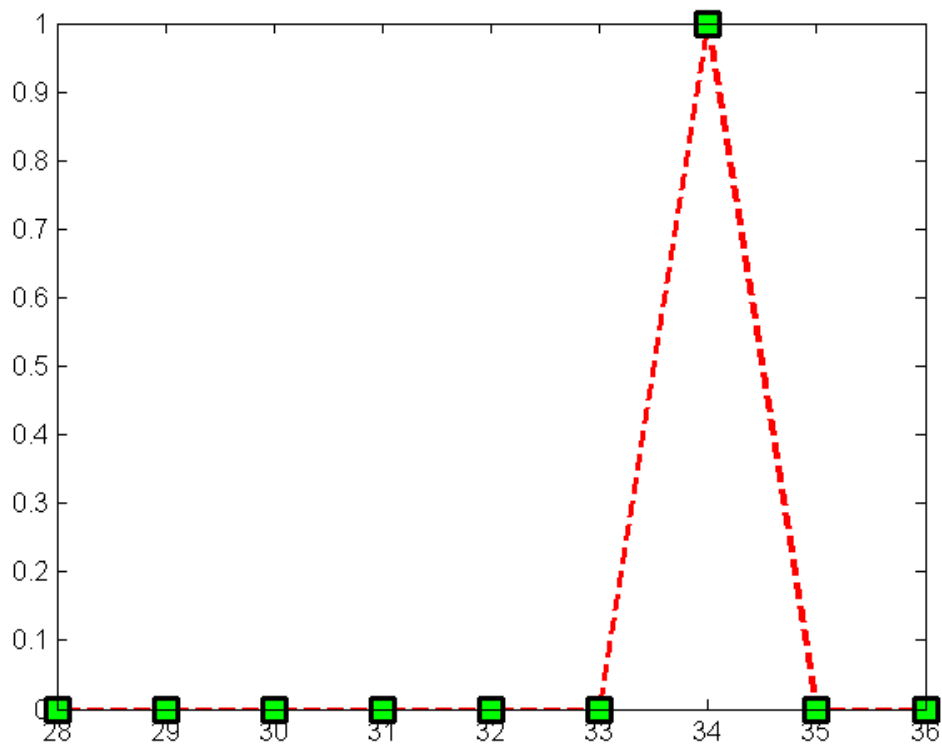
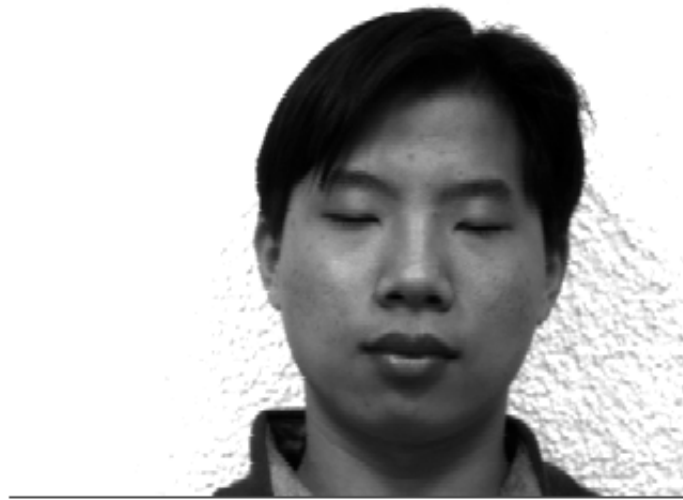
Person matched The Target



Person did not match The Target



Person did not match The Target



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