

1 PURPOSE AND SCOPE

This User Manual contains all essential details about how to compile the project, and details about the libraries used.

2 SYSTEM REQUIREMENT

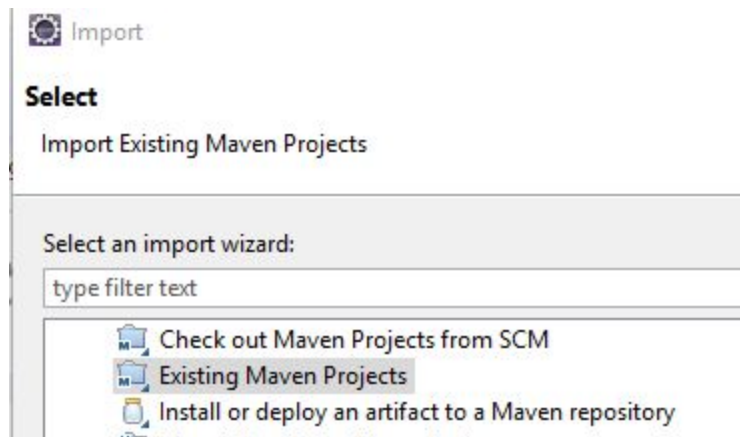
1. JDK 1.6 and above
2. RAM Requirement : 1 GB
3. Maven version 3.6 and above

3 COMPILING THE PROJECT

This project is a maven project and uses lombok to generate certain Java classes like builder. To set up the lombok we can refer [stack over flow link](#).

Step 1:

Import the project in eclipse as a maven project from the submitted zip version.

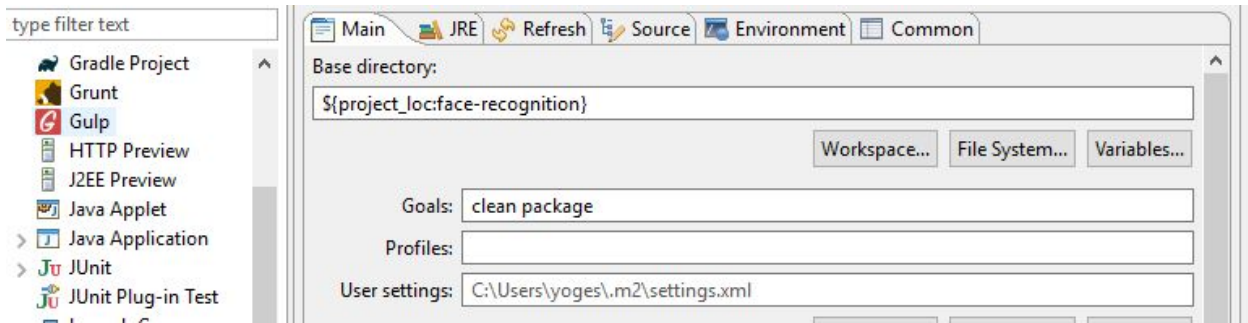


Step 2:

Run the pom.xml file as maven build with goal “clean package”.

FACE RECOGNITION USING PCA, LDA AND LPP

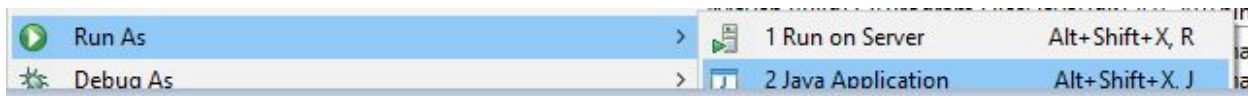
USER MANUAL



Note: Please ignore the junit comparison failure in case if you get one.

Step 3:

Run the CrossValidation.java class as a Java Application.



Step 4:

You can see the Results in console.

```
/Library/Java/JavaVirtualMachines/jdk1.8.0_191.jdk/Contents/Home/bin/java

Grid search Cross validation results
componentsRetained = 40
trainingSet = 280 pictures
testingSet = 120 pictures
-----

PCA  results
-----
knn_value - 2 , accuracy - 0.9333333333333333
knn_value - 3 , accuracy - 0.9416666666666667
knn_value - 4 , accuracy - 0.925
-----

LDA  results
-----
knn_value - 2 , accuracy - 0.9416666666666667
knn_value - 3 , accuracy - 0.975
knn_value - 4 , accuracy - 0.9166666666666666
-----

LPP  results
-----
knn_value - 2 , accuracy - 0.9833333333333333
knn_value - 3 , accuracy - 0.9916666666666667
knn_value - 4 , accuracy - 0.9833333333333333
-----

Process finished with exit code 0
```

4 EXTERNAL DEPENDENCY USED:

4.1 lombok version 1.16.10

Download Link : [Lombok MvnRepository](#)

4.2 guava version 19.0

Download Link : [guava MvnRepository](#)

4.3 junit version

Download Link : [junit MvnRepository](#)