

## ReadMe

Assignment 5:

Total Files submitted:

1. Assignment5.rar - A rar package contains python scripts for k-means algorithms and EM algorithm.

a. KMeans\_loop.py - Implementation of K-Means Algorithm

b. ExpectedMaximization.py - Implementation of EM Algorithm

2. K-Means.pdf - A report on K-Means algorithm and its implementation

3. EM-algorithm.pdf - A report on EM-Algorithm and its report on implementation.

4. The assignment 5.rar contains a image folder which has images for Koala - for  $K = 2, 5, 10$  and  $15$ .

5. setup.py - To install the third party Numpy Package.

6. Pillow - An application for installing "IMAGE" - python package to process the images. (Both 32 bit and 64 bit are provided)

The K-means Algorithm uses two third-party packages called:

1. Numpy

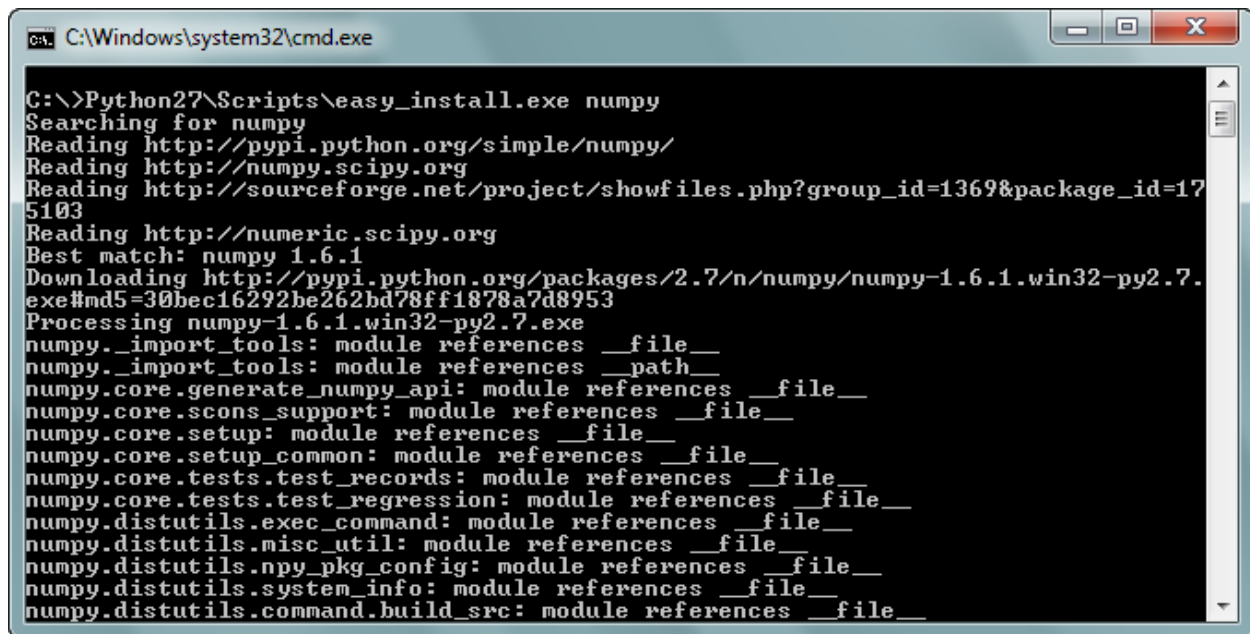
2. Image

The EM Alogrithm uses NumPy package for classification of data models.

Steps to install the Install the packages:

The setup.py file is attached with this project.rar file. Double-click the file and it installs certain tools in python directory.

After that, in command prompt, change the directory to C:\Python33\Tools\Scripts and enter "easy\_install.exe numpy". This will install numpy package on the system



```
C:\Windows\system32\cmd.exe

C:\>Python27\Scripts\easy_install.exe numpy
Searching for numpy
Reading http://pypi.python.org/simple/numpy/
Reading http://numpy.scipy.org
Reading http://sourceforge.net/project/showfiles.php?group_id=1369&package_id=175103
Reading http://numeric.scipy.org
Best match: numpy 1.6.1
Downloading http://pypi.python.org/packages/2.7/n/numpy/numpy-1.6.1.win32-py2.7.exe#md5=30bec16292be262bd78ff1878a7d8953
Processing numpy-1.6.1.win32-py2.7.exe
numpy.__import_tools: module references __file__
numpy.__import_tools: module references __path__
numpy.core.generate_numpy_api: module references __file__
numpy.core.scons_support: module references __file__
numpy.core.setup: module references __file__
numpy.core.setup_common: module references __file__
numpy.core.tests.test_records: module references __file__
numpy.core.tests.test_regression: module references __file__
numpy.distutils.exec_command: module references __file__
numpy.distutils.misc_util: module references __file__
numpy.distutils.npy_pkg_config: module references __file__
numpy.distutils.system_info: module references __file__
numpy.distutils.command.build_src: module references __file__
```