Compile:

javac -classpath commons-cli-1.2.jar:commons-math3-3.2.jar cs362/\*.java

train:

java cs362.Learn -mode train -algorithm lambda\_means -model\_file lambda\_means.model -data bio.train -task classification



java cs362.Learn -mode train -algorithm lambda\_means -model\_file lambda\_means.model -data vision.train -task classification



java cs362.Learn -mode train -algorithm lambda\_means -model\_file lambda\_means.model -data speech.train -task classification



test:

java cs362.Learn -mode test -model\_file lambda\_means.model -data bio.dev \

-predictions\_file lambda\_means\_bio.predictions -task classification

java cs362.Learn -mode test -model\_file lambda\_means.model -data vision.dev \

-predictions\_file lambda\_means\_vision.predictions -task classification

java cs362.Learn -mode test -model\_file lambda\_means.model -data speech.dev \

-predictions\_file lambda\_means\_speech.predictions -task classification

python ./number\_clusters.py lambda\_means\_bio.predictions

python ./cluster\_accuracy.py bio.dev lambda\_means\_bio.predictions

python ./number\_clusters.py lambda\_means\_vision.predictions

python ./cluster\_accuracy.py vision.dev lambda\_means\_vision.predictions

python ./number\_clusters.py lambda\_means\_speech.predictions

python ./cluster\_accuracy.py speech.dev lambda\_means\_speech.predictions

vision:

Label 11: 30

Label 14: 1

Label 1: 17

Label 3: 7

Label 2: 24

Label 5: 1

Label 1: 50

Label 10: 1

Label 2: 24

Label 4: 1

Label 14: 4

5 unique labels