

## BagOfVisualWords

```
int k  
int mode  
float *clusters  
int *memembership
```

```
void createModel(Mat features)  
void createModel(string featuresFile)  
int* computeVisualWords(Mat features)  
int* computeVisualWords(string featuresFile)  
Mat readFeatures(string featuresFile)  
void saveModel(string modelPath)  
void loadModel(string modelPath)  
void setMode(int mode)
```

kmeans

## Kmeans

```
void run(float *clusters, float *points, int k, int featureSize, int count)  
int findNearestCluster(float *clusters, float point, int k, int featureSize)  
float computeDelta(float *clusters, int *membershipChanges, int k, int count)
```

histogram

## Histogram

```
int* run(float *clusters, int *histo, int k, int featureSize, int count)
```