package com.twitter.search.common.util.ml;

import java.util.Map;

/\*\*

\* An interface for linear models that are backed by some sort of map

\*/

public interface MapBasedLinearModel<K> {

/\*\*

\* Evaluate using this model given a feature vector.

\* @param instance The feature vector in format of a hashmap.

\* @return

\*/

boolean classify(Map<K, Float> instance);

/\*\*

\* Evaluate using this model given a classification threshold and a feature vector.

\* @param threshold Score threshold used for classification.

\* @param instance The feature vector in format of a hashmap.

\* @return

\*/

boolean classify(float threshold, Map<K, Float> instance);

/\*\*

\* Computes the score of an instance as a linear combination of the features and the model

\* weights. 0 is used as default value for features or weights that are not present.

\*

\* @param instance The feature vector in format of a hashmap.

\* @return The instance score according to the model.

\*/

float score(Map<K, Float> instance);

}