TagMe! Image Classification

Whatsinaname

- **Software used:**
  Matlab R2009B and Libsvm
- **Classifier used:**
  SVM multi-class classifier(one vs one) with rbf kernel.
  Tuning parameters c and g where g is the gamma in kernel function and c is the cost of C-SVC as mentioned in the libsvm docs for svmtrain.
- **Algorithm used(svmtrain):**
  - Extracted the training data and the labels from the input file.
  - Trained on the training data using libsvm.
  - Fine tuned the svm by taking the coarse grid approach(c=powers of 2,g=powers of 2)
  - Final value used c=32 g=0.00390625
- **Prediction used:**
  - Svmpredict
- **Scope for improvement:**
  - Use SIFT for feature extraction and then create a vocabulary using kmeans(Bag of Words approach).Get histograms for the training and test images.
  - Feed these histograms to an SVM to train.
  - Increasing the vocabulary size increases the accuracy.
  - Using a kdtree to increase the evaluation speed of distances.