One shot recognition

Extending to Action recognition
Animals with Attributes
Caltech 101 Experiments

- Goal, compare results to Fei-fei, Fergus, Perona
- All 101 Categories
- Training set of 3, 6, 15 examples per class
- Testing set of 50 examples per class
Caltech 101 Images
Some Results

- Working with Antonio to compare our results
- His code is using the same examples repeatedly, mine is choosing examples from each category randomly
Some Results

- Optimization Function
Some Results

- Using PCA with 3 training examples
  - 3 training examples over 300 optimization iterations, 1 microset 8.21% mean accuracy
- Using PCA over training and testing examples
  - 3 examples 1000 iter. 1 microset 8.52% mean accuracy
  - 3 examples 600 iter. 10 microsets 9.28%
  - 6 examples 300 iter. 1 microset 10.37%
Areas to test and improve

- Experimenting with
  - different PCA data
  - number of microsets
  - Proper number of iterations for optimization
  - Increased one-shot repetitions in checking accuracy
  - Averaging results from various data