Class-Weighted Convolutional Features for Image Retrieval

**Motivation**

Search by Visual Similarity on Large Scale Databases.

**Proposed Image Encoding**

1) Extraction of Convolutional Features & CAMs

2) Feature Weighting and Pooling

3) Feature Aggregation

4) Region Proposals for Reranking (R) and Query Expansion (QE)

**From Classification to Retrieval**

Class Activation Maps (CAMs) [1] weight the Convolutional Features according to the predicted semantic classes.

We have observed an important variations in the CAMs generated by different CNN architectures.

**Experiments**

Baseline Results

Computational Burden

Networks Comparison

Comparison with the State-of-the-Art for off-the-shelf features