Task-Aware Quantization Network for JPEG Image Compression

Supplementary Material

A Visuals of Classification Experiments

Fig.A1 and A2 provide further visualized results along with CAM localizations. We present the results divided into four categories according to the classification results of ours and baselines. Note that each image of our results is compared to the baseline counterpart which has a higher bitrate.

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Fig. A1. (a) CAMs of baselines are often aimed wrong, which may cause the classification failure. (b) CAMs of baselines are more focused on the local parts of the class objects. The proposed quantization network seem to help fine-grained classification.



wine' 0.400bpp / 'red wine' 0.424bpp / 'g (a) Baseline results are different objects in the images

0.312bpp / 'ashcan'
0.317bpp / 'book jacket
(b) Both ours and baseline results are wrong

Fig. A2. (a) Although CAMs of baselines are attended to different objects from the true labels, their results exactly align with those objects, thus somewhat correct. (b) Despite failure, inferences on ours seem more plausible and similar to the ground-truth.