

Image Clustering Using Combinatorial Markov Random Fields (Comrafs)

Comraf models offer a great variety of design choices for multi-modal clustering. Some modalities can be clustered top-down, some bottom-up, some can remain flat, and some may not be clustered at all. In this work, we present a light-weight Comraf model, called Comraf*, in which only one modality is to be clustered. We show how to translate a general Comraf model into a series of Comraf* models.

We test the resulting models on an image clustering task, where the modalities are images, their colors and texture, their rectangular regions (local features), as well as words from their captions.

IsraellImages dataset. To evaluate our methods, I collected an image dataset that consists of 1823 images downloaded from the [Israel Images](#) website. Each image is assigned into one of 11 categories, which represent main aspects of the Israeli scenery and society. Each image is 375 by 250 pixels and has a 1 to 18 words long caption. Because of the copyright issue, I cannot upload the images to my website, however, I can list their URLs for download from the original [Israel Images](#) website. The Israel Images website owners declare that their images are free to download and use for non-commercial purposes. Please contact me if you experience any difficulty with downloading the images.

[Download IsraellImages info file.](#)

Publication:

R. Bekkerman and J. Jeon. [Multi-modal Clustering for Multimedia Collections](#). In *Proceedings of CVPR 2007* 