Learning to Select and Order Vacation Photographs (supplemental material)

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1. Perceptual Experiments

The main experiment and results are described in the paper. Here, for visualization, we show some of the 4-way forced choice comparisons Amazon Mechanical Turk users had to pick among. For the actual MTurk experiment the order was randomized and the aspect ratio kept at the aspect ratio of original images.

We want to highlight that our model tends to produce much more person centric albums (*e.g.*, see Beach Vacation category). This is especially apparent when looking at second to last example, where I-K05-S-Q and T-K10-T-Q tend to select very vivid pictures of the scene that lack to convey the story or the experience. It can also be noted that in many cases our model tends to prefer to select group photos or photos with an important landmark as the first and/or last photo; it also tends to select photos that are more representative of the experience. This makes albums created by our method appear much better to human observers.

2. Additional Discussion

We consciously choose to ignore timestamps and metadata in our approach. This allowed us a rather puristic view of the problem. This also attempts to address the core of the album making process, which is rooted in visual and esthetic appeal. Photographers were able to create albums long before digital media and meta-data was available; similar can be said for curators of art galleries. We posit that computational methods should strive to do the same if they were to eventually compete with humans in such high-level cognition tasks. While we do not claim to have solved this problem completely, we propose an approach which is a definitive stepping stone towards that direction.

That said, we want to mention that there is nothing that prevents the use of timestamps and/or metadata in our framework. Such information can easily be incorporated in the form of the additional features. In such a case a model would learn when such information would be useful and to what extent through the learned feature weighting.





I-K05-S-R

I-K05-S-R

I-K05-S-R





I-K10-T-Q

I-K10-T-Q

I-K10-T-Q



I-K10-T-R

I-K10-T-R

I-K10-T-R









Our Model

Our Model



I-K05-S-Q

I-K05-S-Q



T-K10-T-Q















Our Model

Figure 1. Forced 4-way choice perceptual experiment: Illustration of the BEACH VACATION category.

I-K05-S-Q



























T-K10-T-R



















T-K10-T-Q

T-K10-T-Q









T-K10-T-R













Figure 2. Forced 4-way choice experiment: Illustration of the BEACH VACATION category.



Figure 3. Forced 4-way choice perceptual experiment: Illustration of the WASHINGTON, DC category.







I-K10-T-Q



I-K10-T-R







I-K05-S-Q





T-K10-T-Q







Our Mode

T-K10-T-R









T-K 1



Our Model



I-K05-S-Q

Our Model











I-K05-S-R









I-K10-T-Q



I-K10-T-R

I-K10-T-R







