Robust Regression on Image Manifolds for Ordered Label Denoising Supplemental Material

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Due to space constraints, the results in the submission were condensed by showing small images or excluding results from poorly-performing competing approaches. These detailed results are from the same experiments in the paper.



Figure 1: For Statue data set with 50% corruption, this figure shows images sampled from an 2D grid of angles in elevation $[6^{\circ}, 84^{\circ}]$ and rotation $[0^{\circ}, 359^{\circ}]$. Red bounding boxes highlight images with elevation or rotation error > 10°.



(a) Original



(b) RANSAC



(c) K-NN



(d) RBFN



(e) SVR



(f) KSPCA



(g) H3R

Figure 2: Randomly selected images sorted by cloudiness estimates (clear to cloudy) by each method. Red boxes highlight incorrect predictions. This group of images shows an relatively easy case where most of the methods can recover the relative cloudiness.



(a) Original



(b) RANSAC



(c) *K*-NN



(d) RBFN





(f) KSPCA





Figure 3: Randomly selected images sorted by cloudiness estimates (clear to cloudy) by each method. Red boxes highlight incorrect predictions. This group of images shows an relatively difficult case where most of the methods include errors in the relative cloudiness predictions.

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(g) H3R

Figure 4: 40 randomly selected images and their associated face pose estimates. Both original labels (shown in (a)) and predicted labels by each method ((b) to (g)) are compared with manually labeled head poses and mislabeled examples are highlighted by red boxes.