Using Locally Corresponding CAD Models for Dense 3D Reconstructions from a Single Image Supplementary Material

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1. Noise Performance

Accurate silhouette estimate can be expected due to the success of segmentation algorithms. However, positions of landmarks are inevitably noisy. Even for human annotators, it is confusing to define the accurate positions of certain landmarks, *e.g.* for landmark "front light" in category "car", the center of front light is difficult to define by eyes. To analyze the robustness of our method against inaccurate landmark estimation, we repeat the synthetic experiments (described in Section 7.2) with different level of Gaussian noise added to the estimated landmark 2D positions. The average pose and structure error among all object categories for each noise ratio are reported in Figure 1. One can see that the silhouette fitting with full components achieves the best performance against all other experiment settings including naive landmark registration in each noise ratio. It implies that the proposed method is more robust against inaccurate landmark annotations/detections.
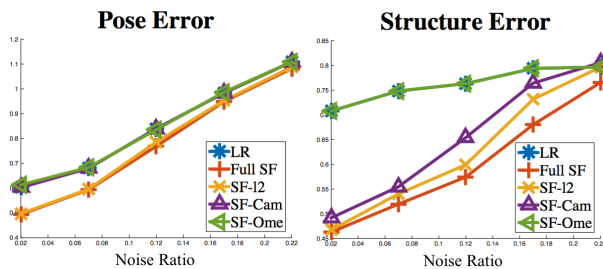

Figure 1. Noise Performance