Image-based localization using LSTMs for structured feature correlation Supplementary Material

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In the supplementary material we want to provide reviewers with more visual examples of our method compared to SIFT-based Active Search [4] and CNN-based PoseNet [3] on outdoor sequences of Cambridge Landmarks [3]. To this end, we obtained dense reconstructions of the datasets using PMVS2 [2] and CMVS [1], which we then projected into the images using the poses computed by each method. Fig. 1 shows results on the St. Mary's Church dataset and Fig. 2 shows results on the King's College sequence. As can be seen, the better pose accuracy obtained by our method compared to PoseNet (c.f. Table 1 in the paper) directly translates to a visually more consistent pose. Obtaining more accurate re-projections is important, e.g., in the context of Augmented Reality. As can be expected from the results shown in the paper, our approach does not quite reach the accuracy of Active Search, demonstrating that there is still room for CNN-based methods to improve.

References

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Figure 1: Cambridge Landmarks, St. Mary's Church. Examples of localizations results for active search (left), PoseNet (middle), and the proposed method (right).



























Figure 2: Cambridge Landmarks, King's College. Examples of localizations results for active search (left), PoseNet (middle), and the proposed method (right).