Optical Flow Results

November 13, 2015

1   Matches in the Boundary regions

We show corresponding matches at the *object boundary regions only* between a pair
of images in the KITTI Optical Flow dataset. A match is considered correct when it
matches with either of the two objects that form the boundary, since it might move with
either of them.

Results are shown for CoMaL+SSD with the second best method, namely, Hessian
+ SIFT.

We see that Hessian + SIFT is able to detect and match fewer points in the boundary
regions compared to CoMaL + SSD (Figures 1(b), 2(b), 3(b)). Furthermore, most of
these matches are in far-away regions with minimal parallax and almost rigid matching.
On the other hand, we can clearly see that CoMaL detects and matches more points in
the boundary regions, especially in close-by regions with more parallax and variation
on one side of the point.

(a) Matches at object boundary regions using CoMaL + SSD
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(b) Matches at object boundary regions using Hessian + SIFT
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Figure 1: Image pair 61

(a) Matches at object boundary regions using CoMaL + SSD

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(b) Matches at object boundary regions using Hessian + SIFT

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Figure 2: Image pair 63

(a) Matches at object boundary regions using CoMaL + SSD
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(b) Matches at object boundary regions using Hessian + SIFT
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Figure 3: Image Pair 82