Image Correction via Deep Reciprocating HDR Transformation (supplementary material)

Anonymous CVPR submission

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1. Additional Results

In this supplementary, we present additional qualitative comparison results between the proposed DRHT model and five state-of-the-art pixel operators. Figure 1 and Figure 2 show some qualitative results on over exposed images in the bright scenes. Figure 3 and Figure 4 show some qualitative results on over exposed images in the dark scenes. Figure 5 shows some results on the under exposed images.

References

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[4] L. Xu, C. Lu, Y. Xu, and J. Jia. Image smoothing via l 0 gradient minimization. In *ACM Transactions on Graphics*, 2011.

[5] Q. Yang. Semantic filtering. In *IEEE Conference on Computer Vision and Pattern Recognition*, 2016.

(a) Input (b) CAPE [2] (c) DJF [3] (d) L0S [4]

(e) WVM [1] (f) SMF [5] (g) Ground truth (h) DRHT

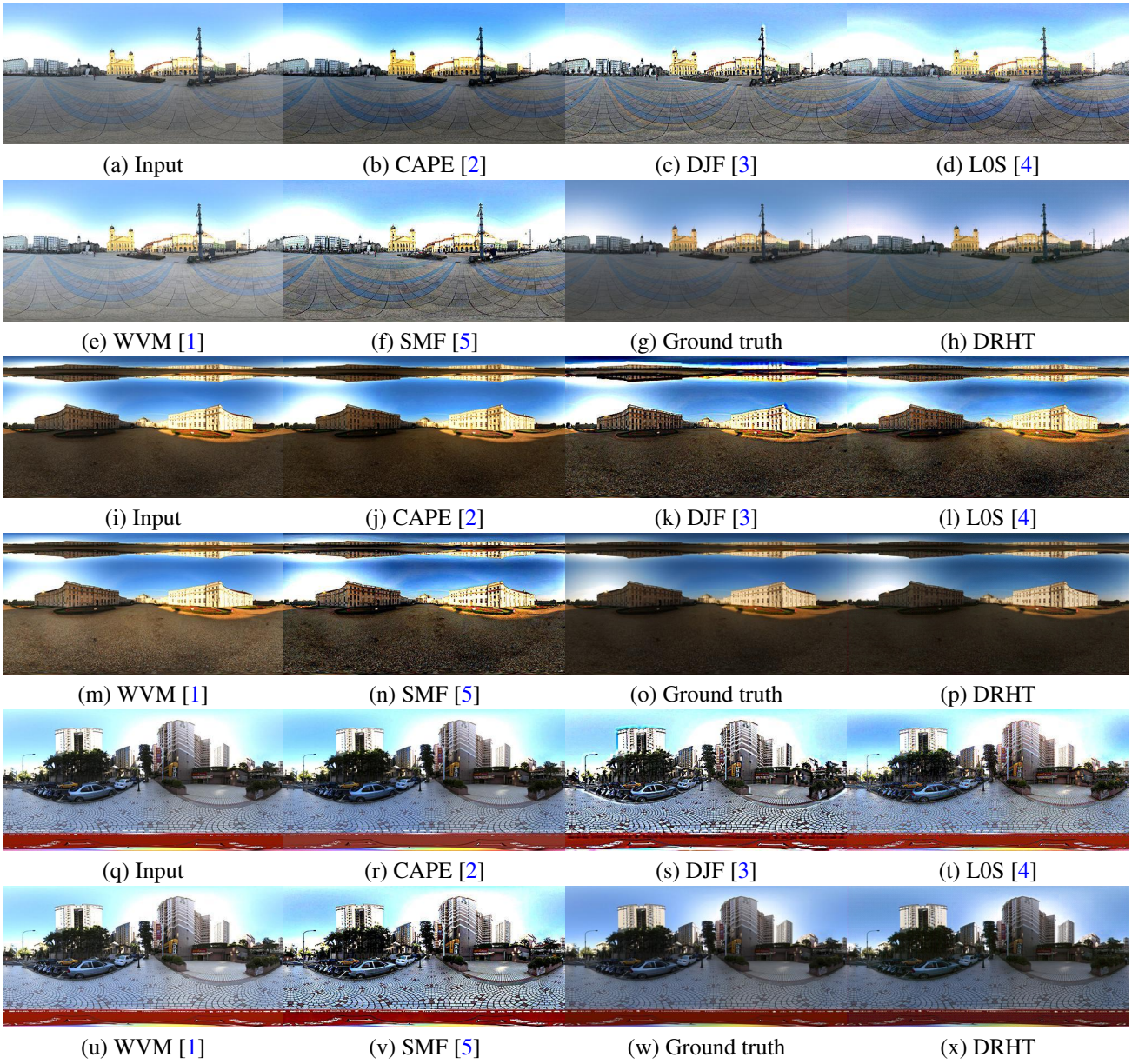
(i) Input (j) CAPE [2] (k) DJF [3] (l) L0S [4]

(m) WVM [1] (n) SMF [5] (o) Ground truth (p) DRHT

(q) Input (r) CAPE [2] (s) DJF [3] (t) L0S [4]

(u) WVM [1] (v) SMF [5] (w) Ground truth (x) DRHT

Figure 1: Visual comparison on over exposed images in the bright scenes with five state-of-the-art LDR correction methods. The proposed DRHT model can successfully recover the missing detail buried in the over exposed regions while existing methods can only enhance the visible detail.



(a) Input (b) CAPE [2] (c) DJF [3] (d) L0S [4]

(e) WVM [1] (f) SMF [5] (g) Ground truth (h) DRHT

(i) Input (j) CAPE [2] (k) DJF [3] (l) L0S [4]

(m) WVM [1] (n) SMF [5] (o) Ground truth (p) DRHT

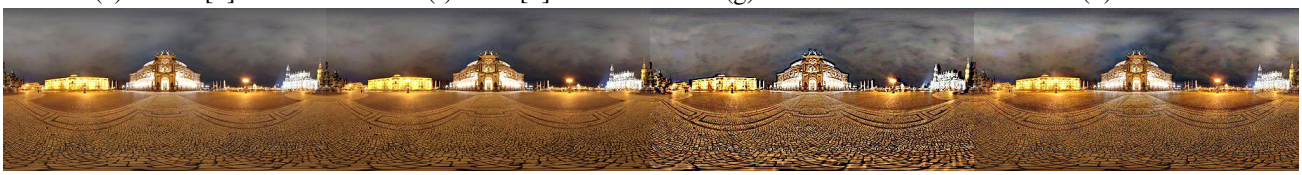
(q) Input (r) CAPE [2] (s) DJF [3] (t) L0S [4]

(u) WVM [1] (v) SMF [5] (w) Ground truth (x) DRHT

Figure 2: Visual comparison on over exposed images in the bright scenes with five state-of-the-art LDR correction methods. The proposed DRHT model can successfully recover the missing detail buried in the over exposed regions while existing methods can only enhance the visible detail.

(a) Input (b) CAPE [2] (c) DJF [3] (d) L0S [4]

(e) WVM [1] (f) SMF [5] (g) Ground truth (h) DRHT



(i) Input (j) CAPE [2] (k) DJF [3] (l) L0S [4]

(m) WVM [1] (n) SMF [5] (o) Ground truth (p) DRHT

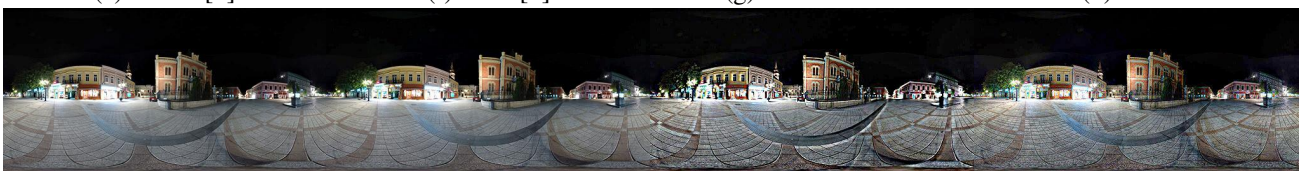
(q) Input (r) CAPE [2] (s) DJF [3] (t) L0S [4]

(u) WVM [1] (v) SMF [5] (w) Ground truth (x) DRHT

Figure 3: Visual comparison on over exposed images in the dark scenes with five state-of-the-art LDR correction methods. The proposed DRHT model can successfully recover the missing detail buried in the over exposed regions while existing methods can only enhance the visible detail.

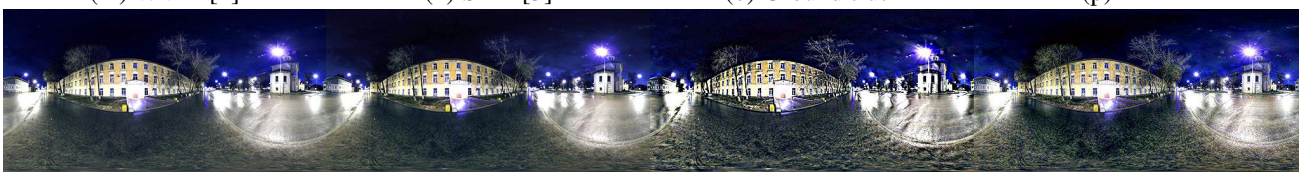
(a) Input (b) CAPE [2] (c) DJF [3] (d) L0S [4]

(e) WVM [1] (f) SMF [5] (g) Ground truth (h) DRHT

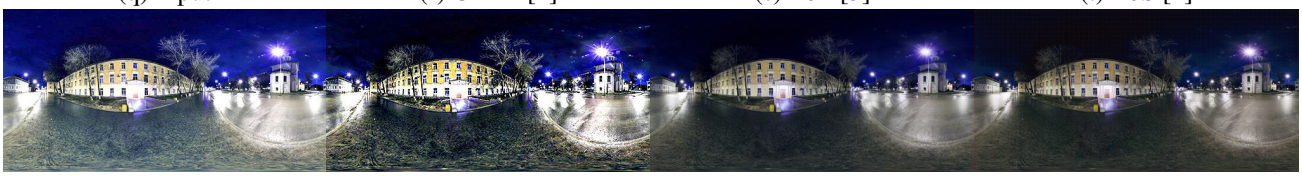


(i) Input (j) CAPE [2] (k) DJF [3] (l) L0S [4]

(m) WVM [1] (n) SMF [5] (o) Ground truth (p) DRHT



(q) Input (r) CAPE [2] (s) DJF [3] (t) L0S [4]



(u) WVM [1] (v) SMF [5] (w) Ground truth (x) DRHT

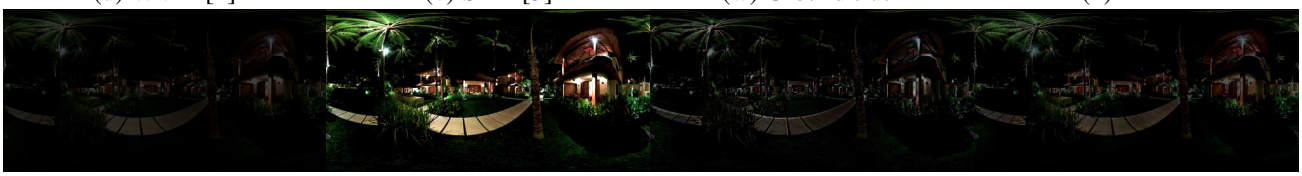
Figure 4: Visual comparison on over exposed images in the dark scenes with five state-of-the-art LDR correction methods. The proposed DRHT model can successfully recover the missing detail buried in the over exposed regions while existing methods can only enhance the visible detail.

(a) Input (b) CAPE [2] (c) DJF [3] (d) L0S [4]

(e) WVM [1] (f) SMF [5] (g) Ground truth (h) DRHT

(q) Input (r) CAPE [2] (s) DJF [3] (t) L0S [4]

(u) WVM [1] (v) SMF [5] (w) Ground truth (x) DRHT



(q) Input (r) CAPE [2] (s) DJF [3] (t) L0S [4]

(u) WVM [1] (v) SMF [5] (w) Ground truth (x) DRHT

Figure 5: Visual comparison on under exposed images in the dark scenes with five state-of-the-art LDR correction methods. The proposed DRHT model can successfully recover the missing detail buried in the under exposed regions while existing methods can only enhance the visible detail.