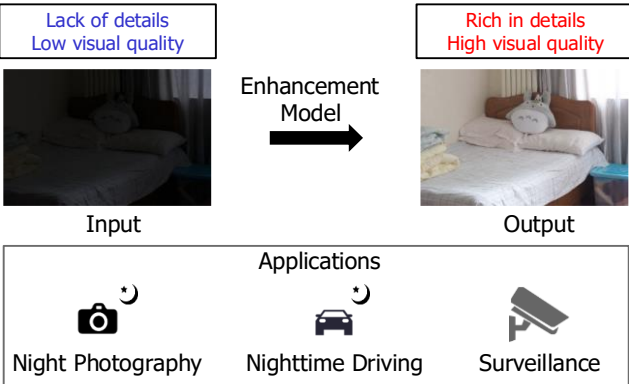


Discrepancy-Guided Automatic Data Augmentation for Low-Light Image Enhancement

張 恆禱 池永研究室 修士課程修了

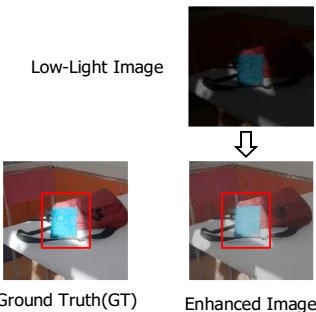
Background

Low-light Image Enhancement



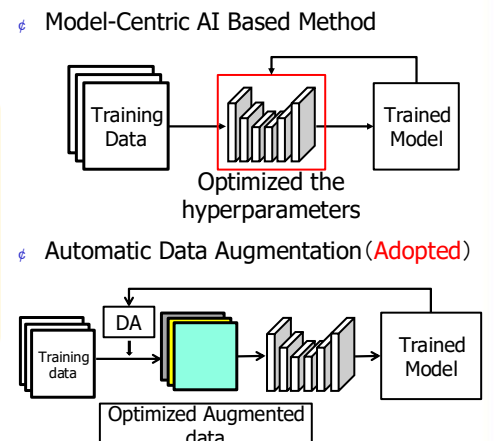
Challenges

- Model performs badly in restoring the high-frequency details.

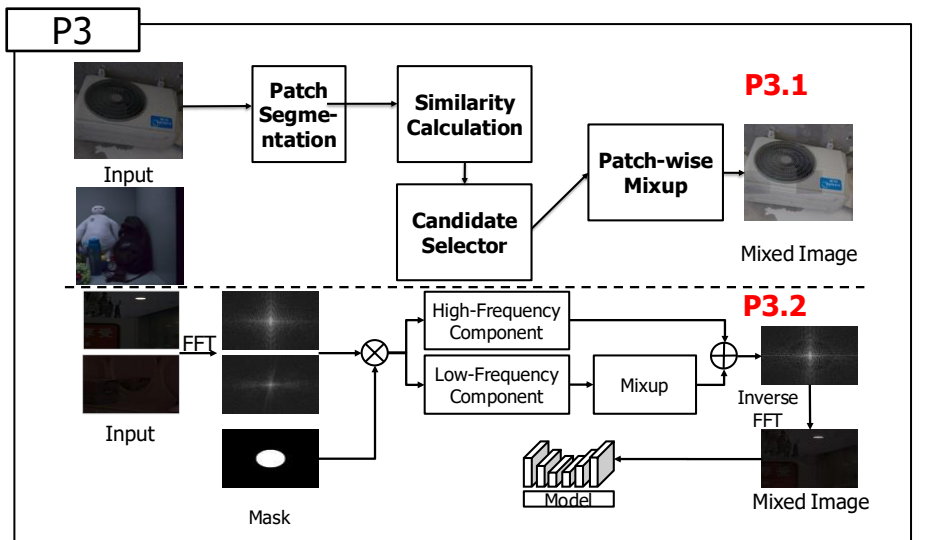
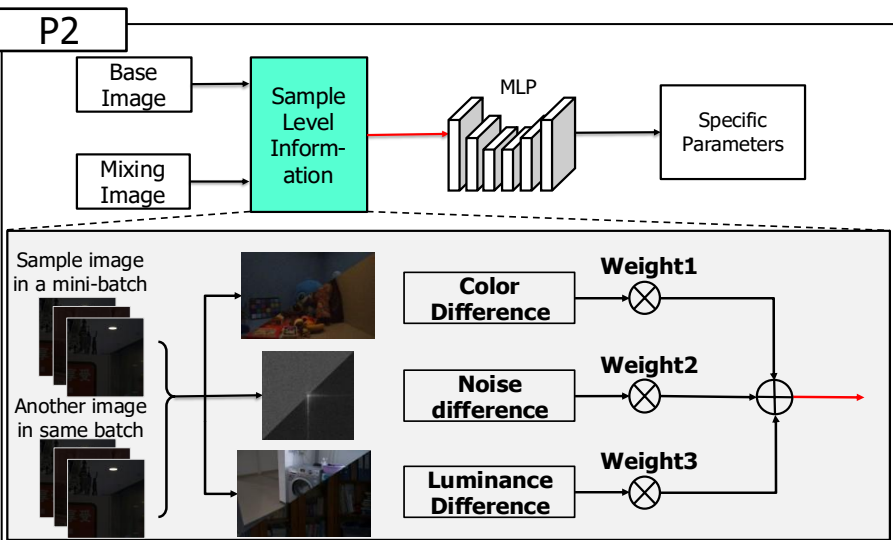
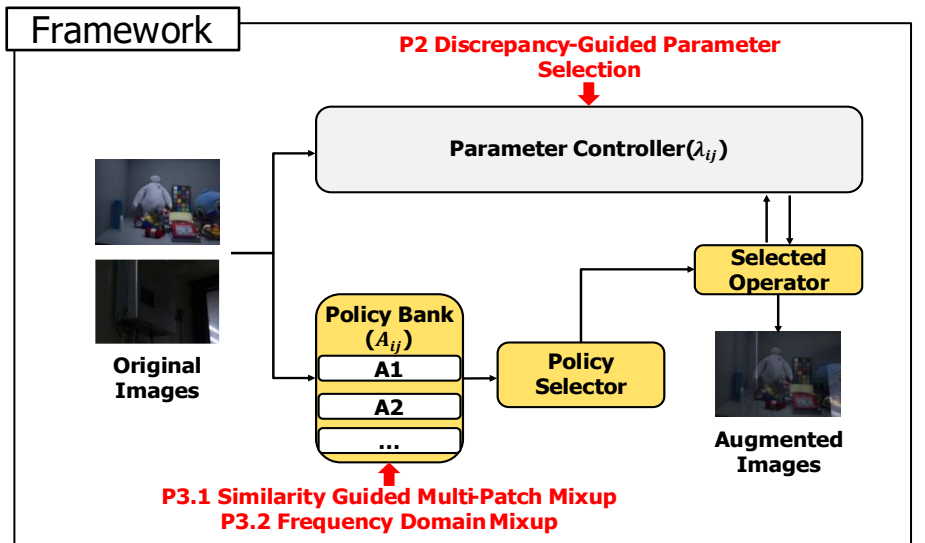
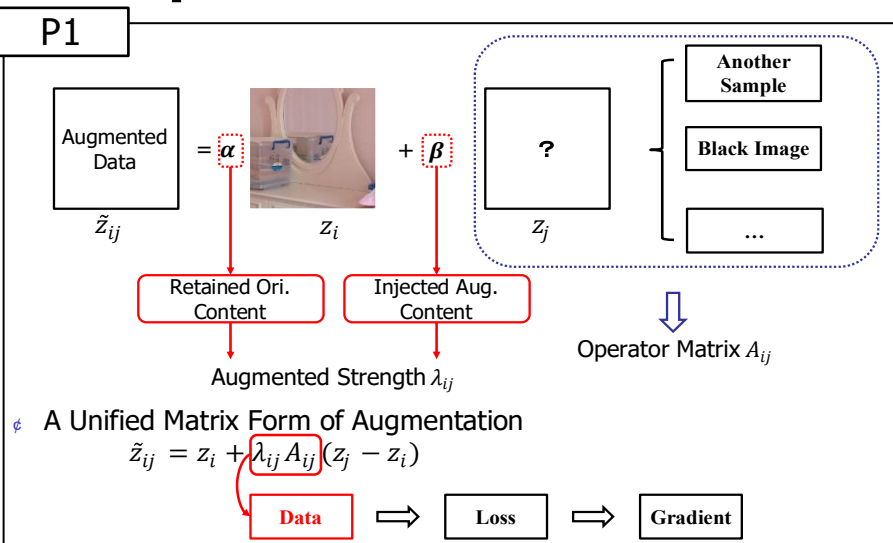


In low-light scenes, high-frequency details are often corrupted or obscured by noise and other degradations.

Approaches



Proposals



Experiment Results

	LOLv2_real			Average across 4 datasets		
Methods	PSNR↑	SSIM↑	LPIPS↓	PSNR↑	SSIM↑	LPIPS↓
HVI-CIDNet	23.3194	0.8569	0.1499	24.4394	0.8292	0.2415
+Cutmix	21.1663	0.8568	0.1216	23.5079	0.83015	0.2156
+Mixup	23.5831	0.8657	0.1174	24.3203	0.8286	0.2159
+CutFreq	23.3188	0.8666	0.1209	24.7298	0.8363	0.2052
+DADA	23.9255	0.8700	0.1179	24.6823	0.8331	0.2138
+P2+P3	23.9363	0.8698	0.107	25.0896	0.8379	0.2089

Conclusion

- As across four datasets, proposed method achieves the best average PSNR/SSIM, improving over the baseline by +0.65 dB and +0.0087, respectively.

