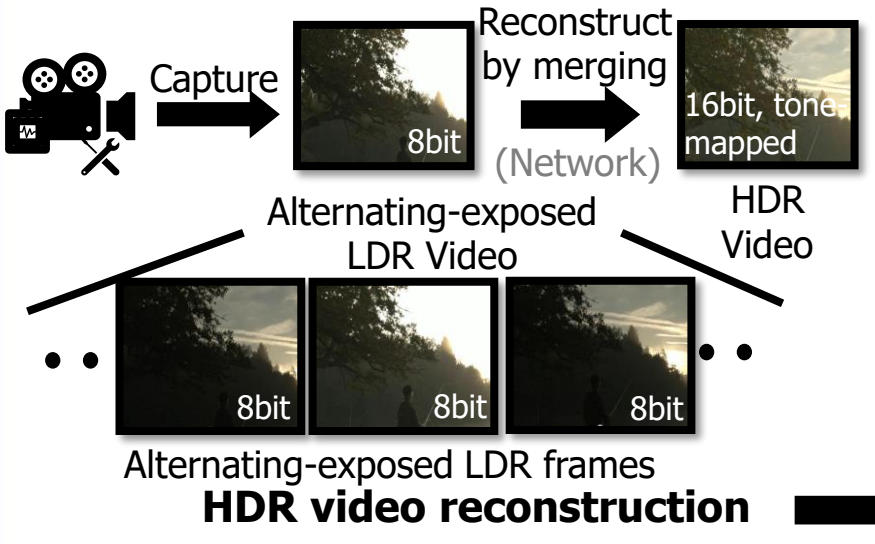
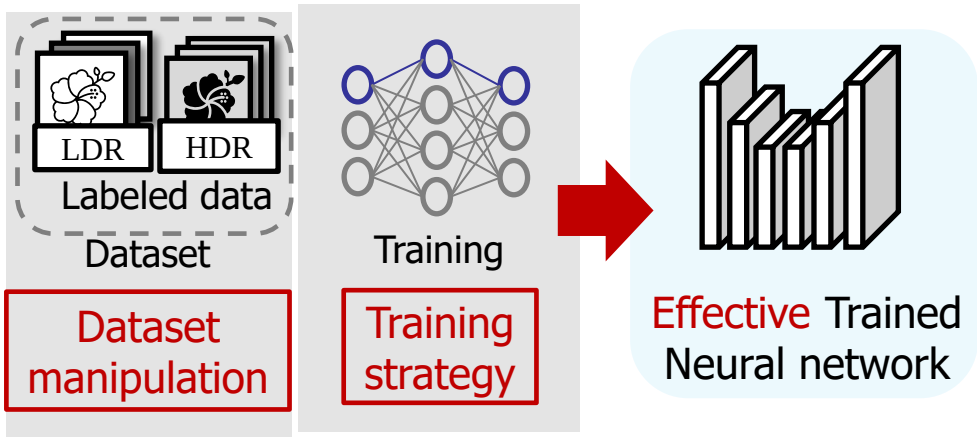
Pixel-Level Feature Emphasis Based Training Strategy and Dataset Manipulation for HDR Video Reconstruction with Deep Learning

趙　鳳山　博士課程修了

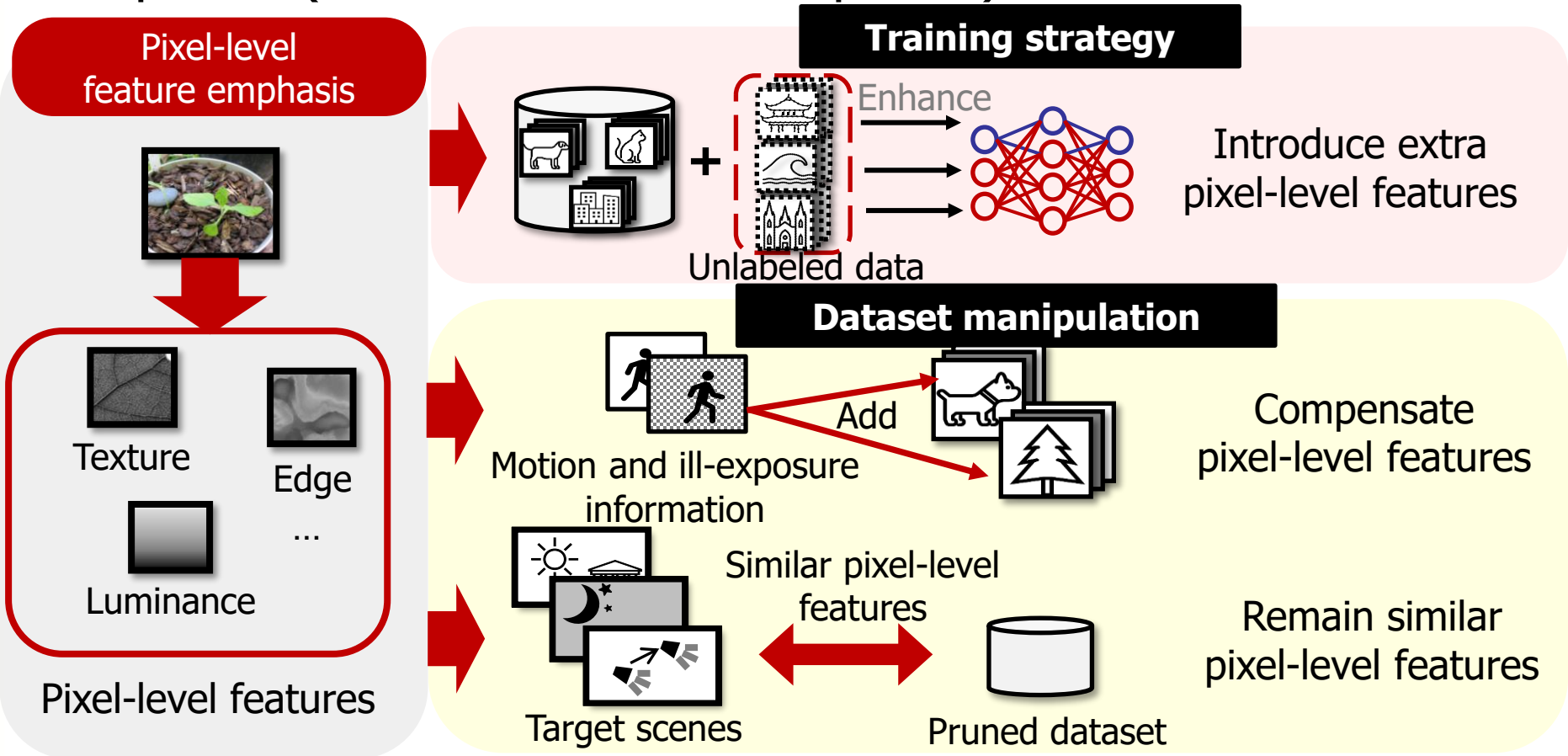
Background





HDR video reconstruction → **Needed deep learning-based techniques**

Proposals (Pixel-level feature emphasis)



Experiment results

- Few-shot condition: PSNR-T of 41.67 dB , PSNR-σ of 0.44 and HDR-VQM of 87.16
- Data augmentation: PSNR-T improvement of 0.96 dB and HDR-VQM improvement of 2.43 compared with related work
- Dataset pruning: PU-PSNR average improvement of 0.68dB and HDR-VDP average improvement of 0.9 on multiple target scenes

Conclusion

The proposals constructs an effective and efficient training framework for deep learning-based video processing techniques, especially HDR video reconstruction

Graduate School of Information, Production and Systems
Waseda University