



Image Harmonization With Attention-based Deep Feature Modulation

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Background

- Image harmonization is an important technique
 - ▣ inharmonious appearance degrades quality of composites



background



foreground



composited

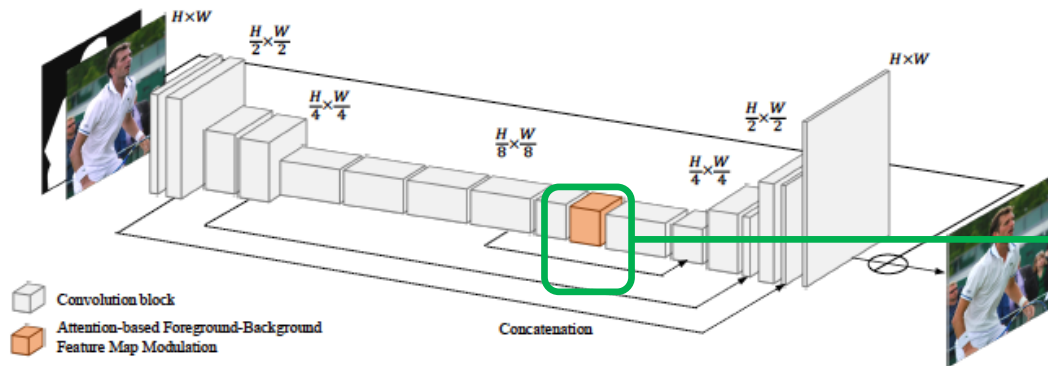


harmonized

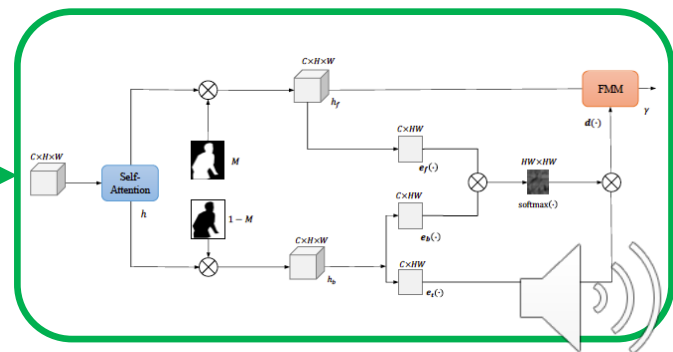


Overview

- Model based on a fully convolutional network
 - Automatic image harmonization, arbitrary input size
- Attention-based Foreground-background Feature Map Modulation Module
 - Differentiable
 - Adjust appearance of foreground according to background



Model architecture



Module

Results

Qualitative

Quantitative



Input

Mask

SoTA

Ours

Ground Truth

| Method | MSE↓ | PSNR↑ |
|-------------------|--------------|--------------|
| Lalonde and Efros | 150.53 | 30.16 |
| Xue et al | 155.87 | 31.40 |
| Zhu et al | 204.77 | 30.74 |
| DIH | 76.77 | 33.41 |
| S2AM | 59.67 | 34.35 |
| DoveNet | 53.33 | 34.76 |
| Ours | 33.57 | 35.27 |

