

# IMAGE SUPER-RESOLUTION USING CNN OPTIMISED BY SELF-FEATURE LOSS

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## Problem statement

Technical limitations in imaging devices and systems cause the degradation during image acquisition.

## Methodology

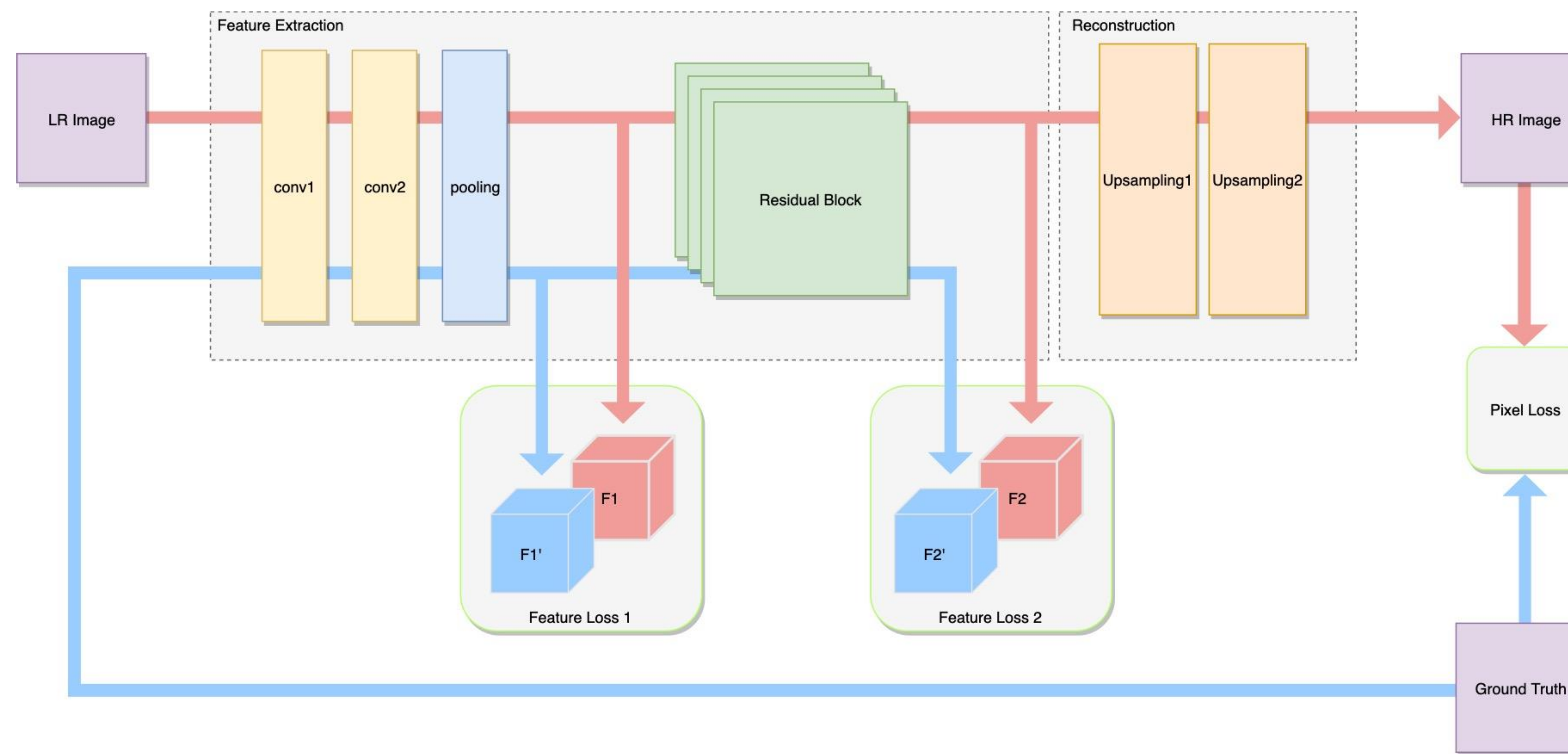
Deep learning based single image super resolution

## Innovation

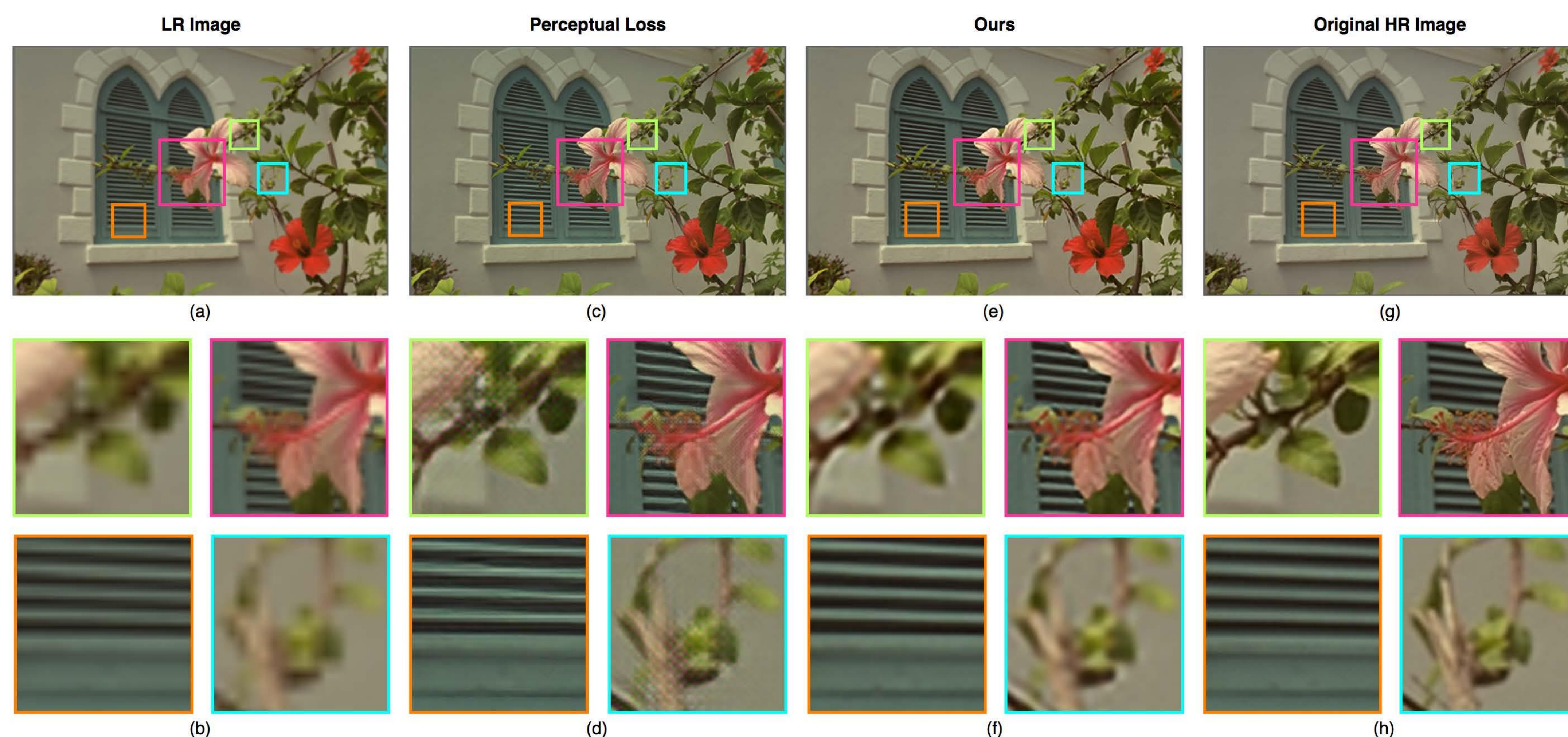
## LOSS FUNCTION

## Proposed network

Self-Feature-based Super-Resolution (SFSR)



## Performance



Set5	Pixel	VGG-feature	Self-feature
<b>PSNR</b>	29.29dB	26.94dB	29.85dB
<b>SSIM</b>	0.8853	0.8166	0.8872
Set14	Pixel	VGG-feature	Self-feature
<b>PSNR</b>	26.23dB	24.60dB	29.92dB
<b>SSIM</b>	0.8044	0.7324	0.81072

Table 4.1: Performance of different loss functions for our networks on Set5 and Set14 benchmark data. [3× upscaling]

Our code is made publicly available:  
<https://github.com/OranginaGaoZhao/Self-Feature-Super-Resolution>