Supplementary Material to "SCEESR: Semantic-Control Edge Enhancement for Diffusion-Based Super-Resolution"

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1 More visual comparisons with GAN-based and DM-based SR methods

Qualitative comparisons of real-world image super-resolution methods are provided in Figure 1, Figure 2 and Figure 3. We compare SCEESR with one-step DM-based SR methods OSEDiff[1], multi-step DM-based SR methods ResShift[2], StableSR[3], SeeSR[4] and PASD[5] and GAN-based SR methods BSRGAN[6], RealESRGAN[7] and FeMaSR[8]. All comparative results are obtained using officially released codes or models.

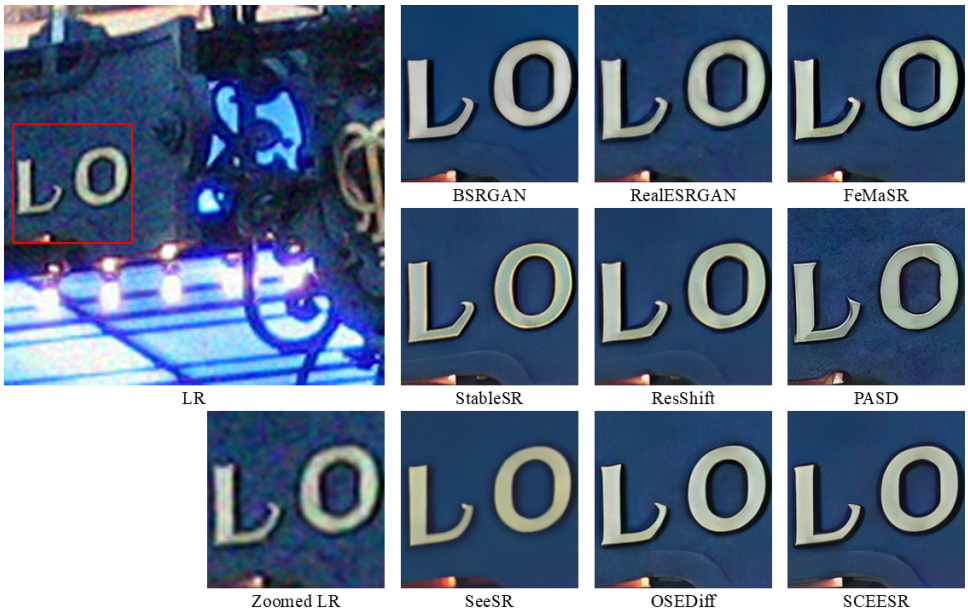

Fig. 1 Vision comparisons of different GAN-based and DM-based SR methods on a logo named LO.

Fig. 2 Vision comparisons of different GAN-based and DM-based SR methods on a frog's toes.

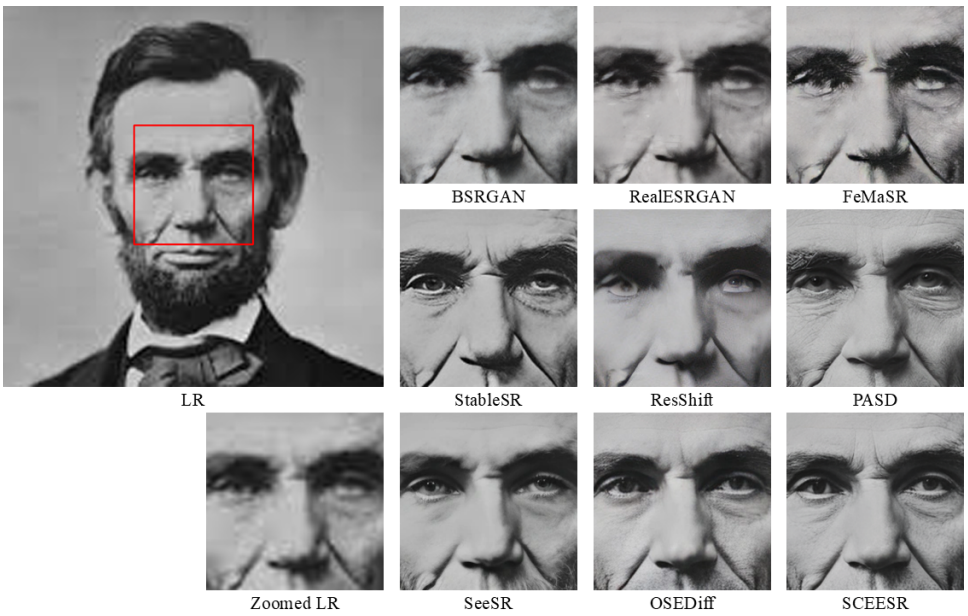

Fig. 3 Vision comparisons of different GAN-based and DM-based SR methods on Lincoln's face.

2 Effectiveness of ControlNet and AME Loss

Qualitative comparison in Figure 4 and Figure 5 with state-of-the-art methods on both synthetic and read-world benchmarks between the results of the first phase of SCEESR with only L2 loss and LPIPS[9] loss(the first row) and the results of the second phase of SCEESR with semantic control edge enhancement ControlNet and AME loss(the second row).

Fig. 4 Qualitative comparison of two phases.

Fig. 5 Qualitative comparison of two phases.

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