Masked Loss and Partial Convolution to Ignore Unwanted Structures.

TECHNISCHE UNIVERSITÄT DARMSTADT

TUDA
Graphisch-Interaktive Systeme

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Motivation

- Inpainting X-ray images
- Removal of watermarks, texts and crosshairs
- Learning from a single image using SinGAN

Method

- Creation of loss mask and masked input
- Train SinGAN with masked loss and partial convolution
- Sample with zero noise or inject masked input

Results

- Captureing texture for big and small not learned areas
- Varying results with big structures in not learned areas
- Long training time per image
- Instabilities with bigger Images

Cherry Picked Results

Original   Inpainted

Original   Loss Mask   Masked Input   Sample Without Noise   Sample Best Inject. Scale