

Deep Restore

Inpainting Comparision

September 26, 2018

Description

- ▶ Comparison of 3 CNN approaches + 1 Perona-Malik architecture
- ▶ The two CNN approaches (Densenet and UNet) were trained on a single channel to result in a single channel image. We train on R, G and B channel, so we have more training data. Also the loss was just calculated on masked pixels.
- ▶ Also, an additional densenet approach with 1000iterations
- ▶ The Perona-Malik method uses following parameters (look at comparison perona-malik for parameter description):
 - ▶ α : 0.005
 - ▶ γ : 0.001
 - ▶ τ : 5
 - ▶ end time: 15
 - ▶ σ_g : 0.7
 - ▶ σ_t : 1.5

Train - Ex1



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter

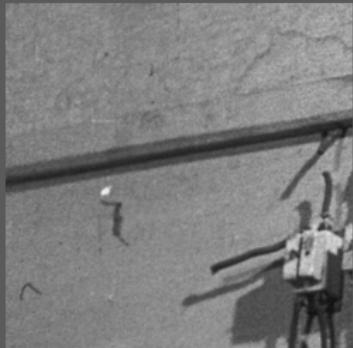


(b) Densenet

(c) UNet

(d) Perona-Malik

Train - Ex2



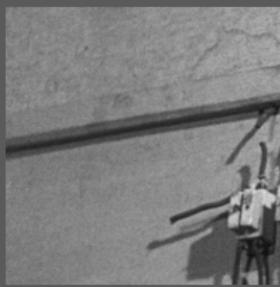
(a) Input



(b) Mask



(c) GT Output



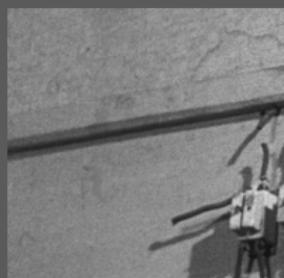
(a) Densenet
1000iter



(b) Densenet



(c) UNet

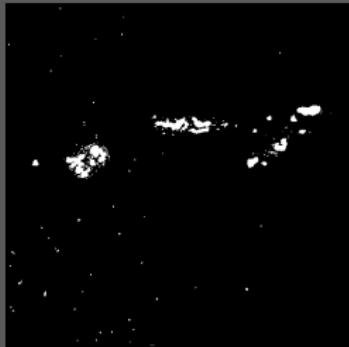


(d) Perona-Malik

Train - Ex3



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet
1000iter



(c) UNet

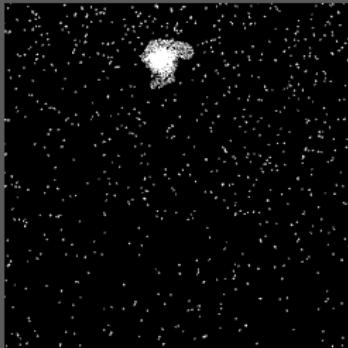


(d) Perona-Malik

Train - Ex4



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet



(d) Perona-Malik

Train - Ex5



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet

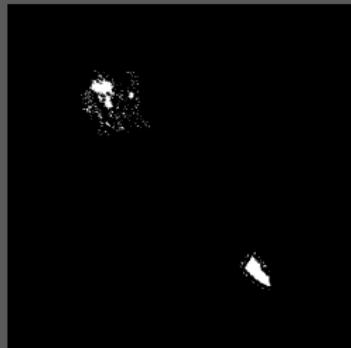


(d) Perona-Malik

Train - Ex6



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet



(d) Perona-Malik

Train - Ex7



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet

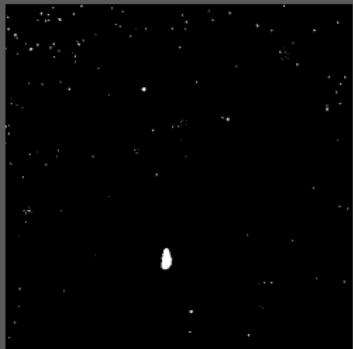


(d) Perona-Malik

Train - Ex8



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) DenseNet



(c) UNet



(d) Perona-Malik

Train - Ex9



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet



(d) Perona-Malik

Train - Ex10



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet

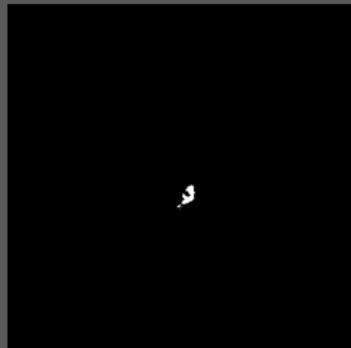


(d) Perona-Malik

Train - Ex11



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet

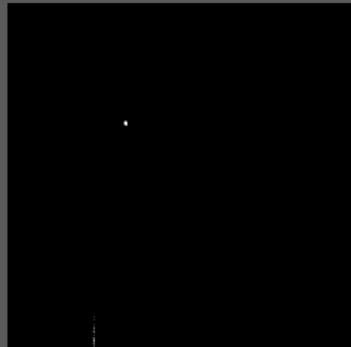


(d) Perona-Malik

Train - Ex12



(a) Input



(b) Mask



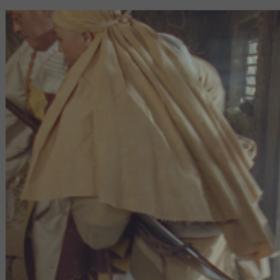
(c) GT Output



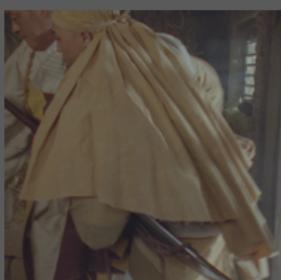
(a) DenseNet
1000iter



(b) DenseNet



(c) UNet



(d) Perona-Malik

Train - Ex13



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet

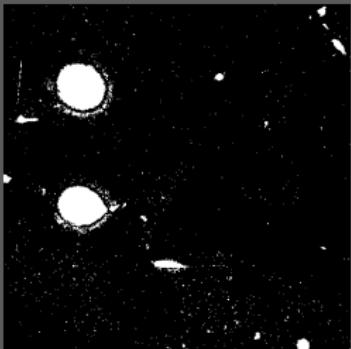


(d) Perona-Malik

Train - Ex14



(a) Input



(b) Mask



(c) GT Output



(a) Densenet
1000iter



(b) Densenet



(c) UNet

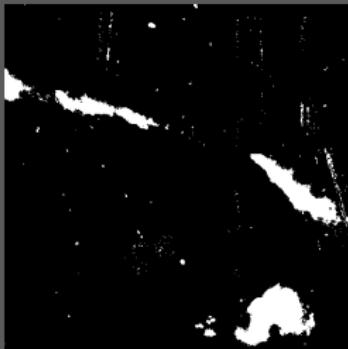


(d) Perona-Malik

Train - Ex15



(a) Input



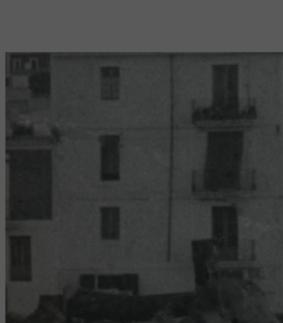
(b) Mask



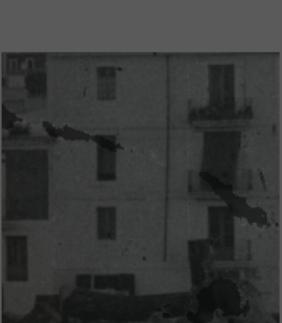
(c) GT Output



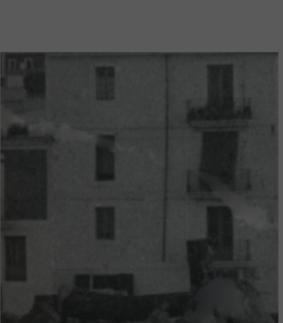
(a) Densenet
1000iter



(b) Densenet



(c) UNet



(d) Perona-Malik