

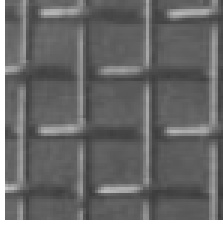
CS 663 Project Report

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Divyam Bapna:- 160070038

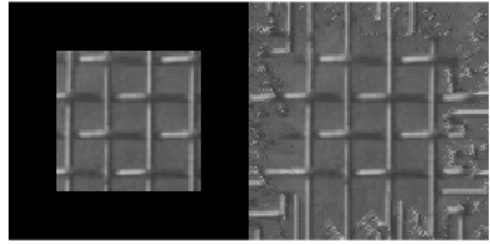
November 21, 2018

1 Experimental Results

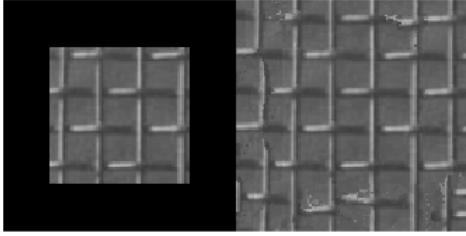
1.1 Texture 1



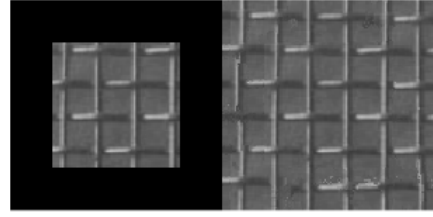
(a) Texture 1



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.03$

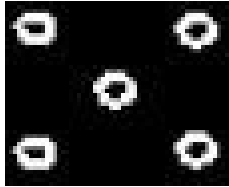


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.03$

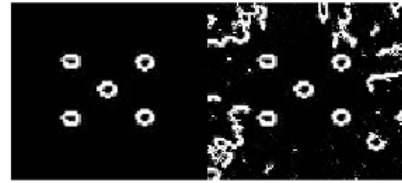


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.03$

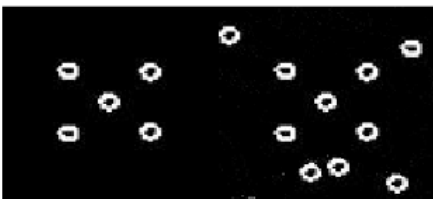
1.2 Texture 2



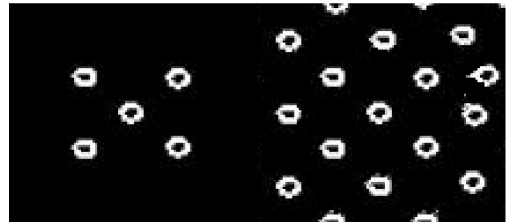
(a) Texture 2



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.03$

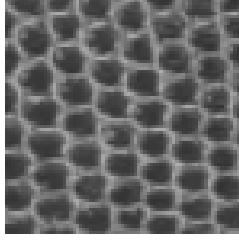


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.03$

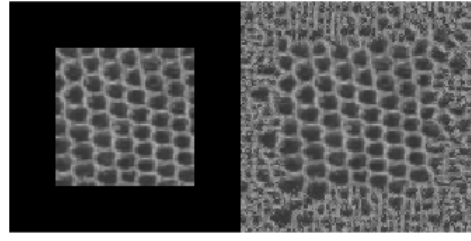


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.03$

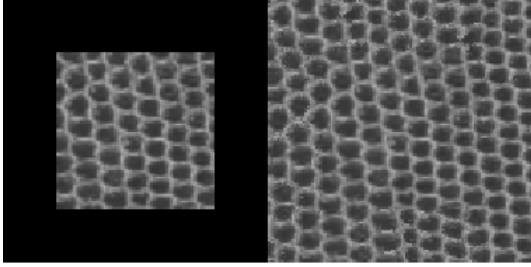
1.3 Texture 3



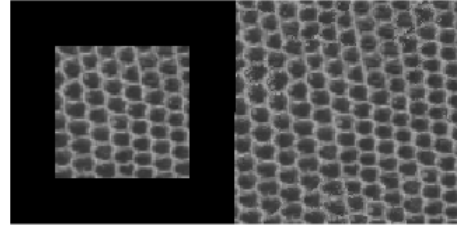
(a) Texture 3



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.03$



(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.03$

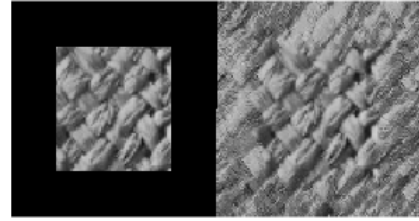


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.03$

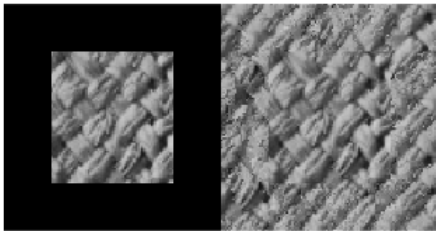
1.4 Texture 4



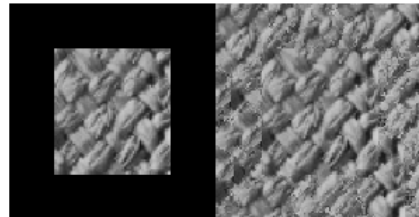
(a) Texture 4



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.03$

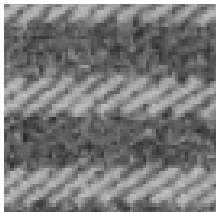


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.03$

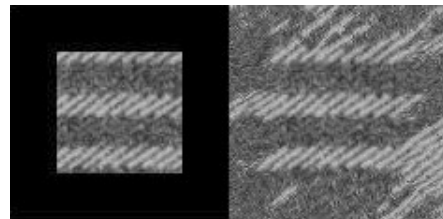


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.03$

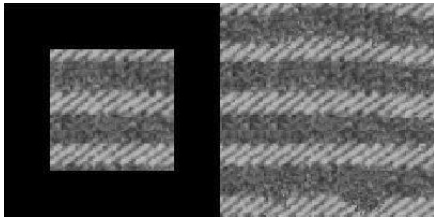
1.5 Texture 5



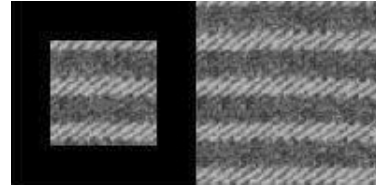
(a) Texture 5



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.03$

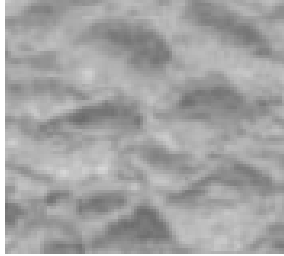


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.03$

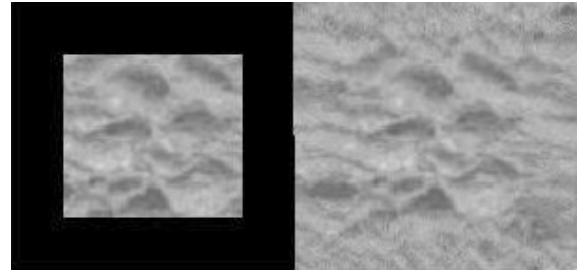


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.03$

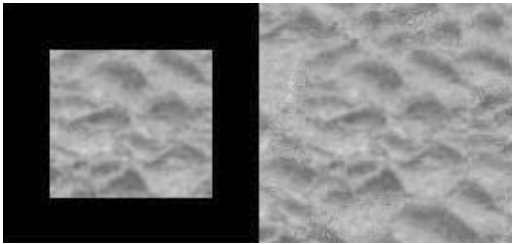
1.6 Texture 6



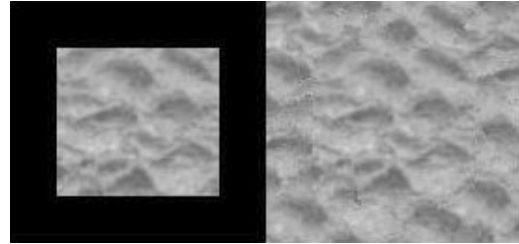
(a) Texture 6



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.03$

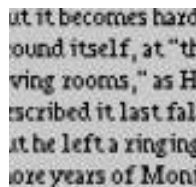


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.03$

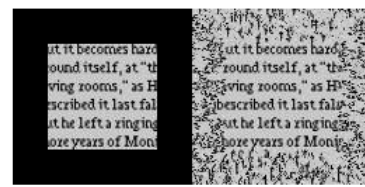


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.03$

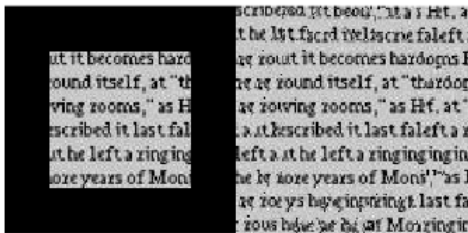
1.7 Texture 7



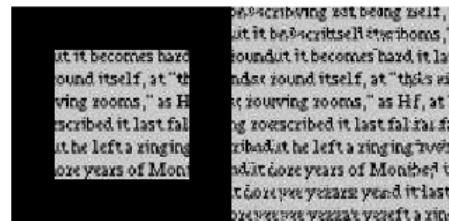
(a) Texture 7



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.005$

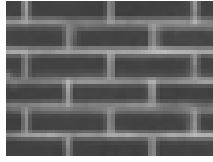


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.005$

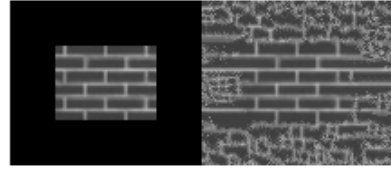


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.005$

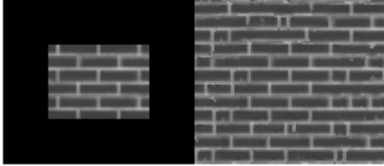
1.8 Texture 8



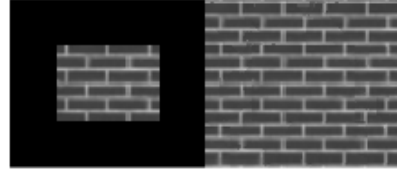
(a) Texture 8



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.005$

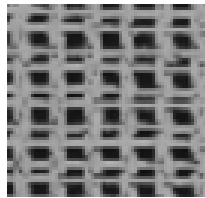


(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.005$

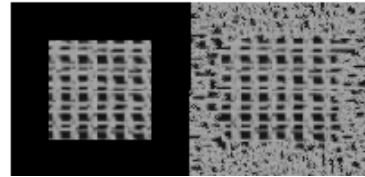


(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.005$

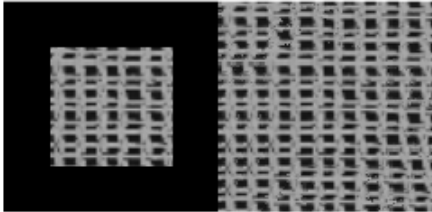
1.9 Texture 9



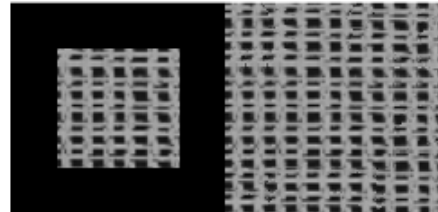
(a) Texture 9



(b) Rebuilt Texture $W = 5$ & $\epsilon = 0.005$



(a) Rebuilt Texture $W = 15$ & $\epsilon = 0.005$



(b) Rebuilt Texture $W = 23$ & $\epsilon = 0.005$

1.10 Image Extension



Figure 19: Original Image

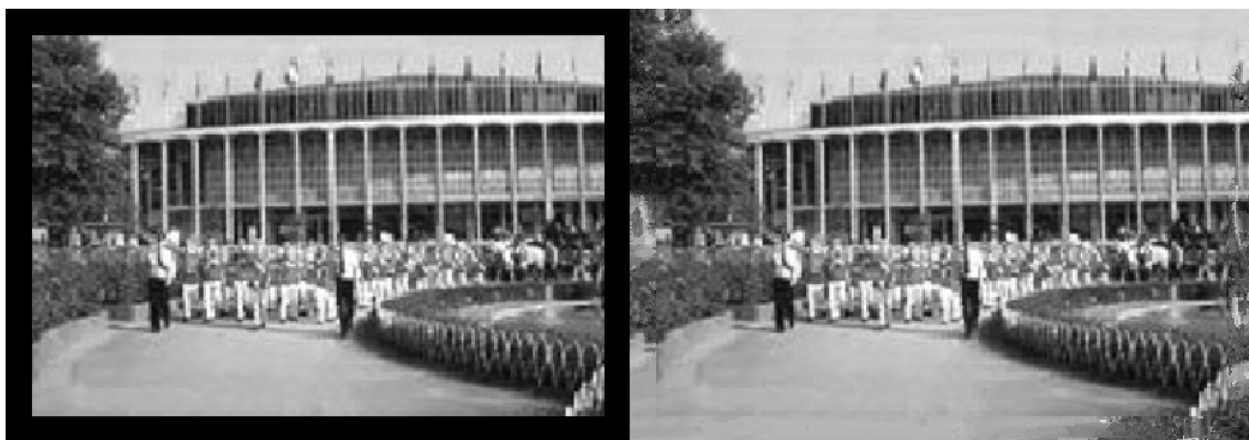


Figure 20: Extended Image

2 Observations

- Our results clearly demonstrated that on increasing size of square patch the reconstruction of output image improved which tallied with the observations made in the paper.
- This could be explained from the fact that these are textures and there is repetition of blocks of pixels. To ensure that repetition is captured correctly we have to choose correct size of square patch.
- Also there is a possibility of wrong pixels being chosen for reconstruction which would get repeated again and again and thus result in inaccurate reconstruction since the model is probabilistic.