EEC 289A Assignment 2

Non-parametric Data Synthesis

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**Introduction:**

**Methodology:**

**Experiment:**

**Conclusion:**

**Appendix:**

A group of squares with different shades of black and white

Description automatically generated

Fig. 1: Image Dictionary of size 100

Fig. 2: Image Dictionary of size 500

A black and white grid

Description automatically generated

Fig. 3: Image Dictionary of size 1000

A black and white square

Description automatically generated

Fig. 4: Image Dictionary of size 5000

A close-up of a grid

Description automatically generated

Fig. 5: Image Dictionary of size 10000

A number in black squares

Description automatically generated with medium confidenceA number in black squares

Description automatically generated with medium confidence

Fig. 6: Reconstructed Images from Dictionary size 100

A number written in white on black squares

Description automatically generated

A number written in white on black squares

Description automatically generated

Fig. 7: Reconstructed Images from Dictionary size 500

A group of numbers in black squares

Description automatically generated

A group of numbers in black squares

Description automatically generated

Fig. 8: Reconstructed Images from Dictionary size 1000

A number written in black squares

Description automatically generated

A number written in black squares

Description automatically generated

Fig. 9: Reconstructed Images from Dictionary size 5000

A number in black squares

Description automatically generated with medium confidence

A number in black squares

Description automatically generated with medium confidence

Fig. 10: Reconstructed Images from Dictionary size 10000

**References:**

1. A. A. Efros and T. K. Leung, "Texture synthesis by non-parametric sampling," Proceedings of the Seventh IEEE International Conference on Computer Vision, Kerkyra, Greece, 1999, pp. 1033-1038 vol.2, doi: 10.1109/ICCV.1999.790383.
2. Chen, Yubei, (2024). “Generative Models – Autoregressive Models,” Lecture Notes.
3. Github Repository: <https://github.com/Th3RandyMan/K-Mean-Clustering-MNIST>