

14-10-25

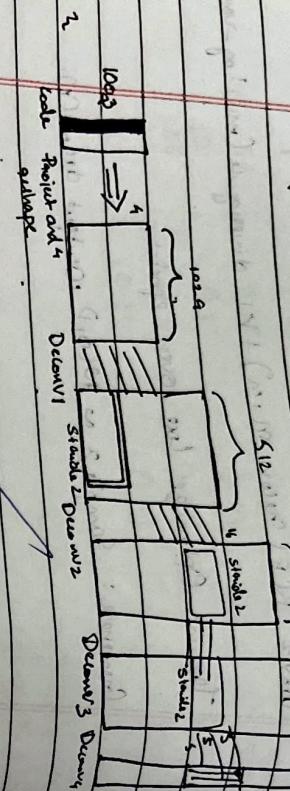
Topic:

Design To Generate

Complex Color Images

Area:

DGAN Architecture:



Objectives:

1. Design and train a generator and discriminator using deep convolutional neural networks.
2. Generate RGB Images from random noise vectors.
3. Evaluate quality improvement through visual inspection and loss comparison.

Pseudocode:

- Initialize generator and discriminator networks.
- Feed random noise to generator \rightarrow produce fake images.
- Discriminator classifies real vs fake images.
- Train both models adversarially until generated images look realistic.

Observation:

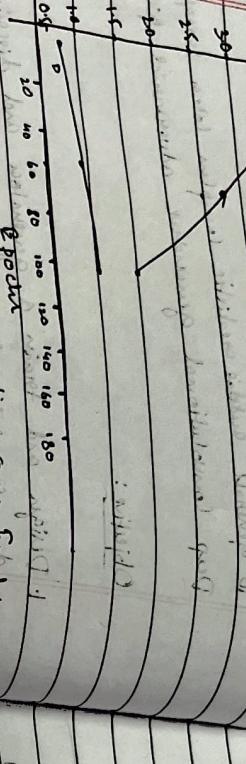
- Generator improves image sharpness as training progresses.

- Discriminator stabilizes around mid-level accuracy.

- Generated images gradually assemble from dark shapes.

Observation Table:

Epoch	Generation	Discriminators	Output
100	6.12	(0.59)	Blurred blankets
50	2.85	(0.32)	Recognized shapes
100	1.67	0.81	Realistic colors



Generator vs Discriminator loss over Epochs

Result:

DEGAN successfully generated visual learning complete color image after sufficient training epochs.

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Model 1
Model 2
Model 3
Model 4