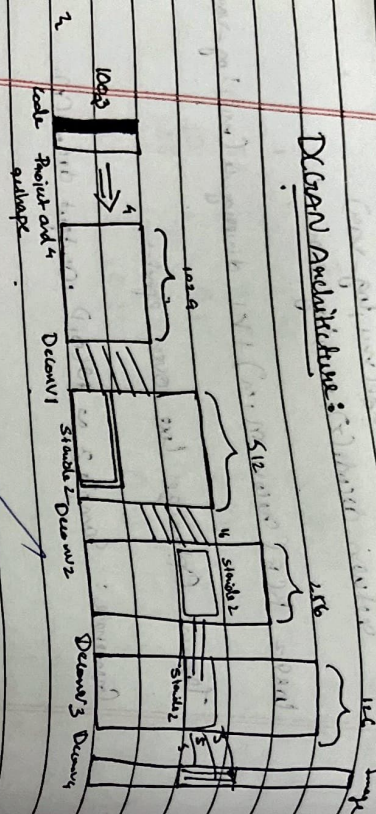


DCGAN Architecture:

10-10-25

Ex: 12

DCGAN To Generate
Caption Labels ImageGoal:

To generate realistic caption labels image using
Deep convolutional generative adversarial Network.

Objective:

1. Design and train a generator and discriminator with deep convolutional layers.
2. Generate RGB image from random noise vector.
3. Evaluate quality improvement through visual inspection and loss comparison.

Pseudocode:

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

Observation:

- Generator improves image sharpness as training progresses.
- Discriminator stabilizes around mid-level accuracy.
- Generated image gradually resembles real dataset patterns.

