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MONDAY

MAY

2022

02

"Approach"

(1) Founded some issues based on survey, i.e.

- a) there is a gap b/w synthetic & real images
- b) blind image clearance only applied to specific texture OR patterns
- c) blur image is given to neural network as an input but those are manually blurred so there is no concept like blind type blur because if you are doing manual blurrification then it is restricted to specific type of blur.

(2) Based on founded issues following approach can be used to overcome them,

(2.1) generative adversarial network is used to generate synthetic blur parity dataset. This is not manual blur process, so we can claim that it is unknown type blur. And also gap b/w synthetic & real image will be reduced. Because blurred image generated by GAN contains blur similar to natural OR realtime blur.

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03

TUESDAY

MAY

2022

(2.2) in the GAN, specifically two generator & one discriminator type architecture will be used. And again to make it robust transformer will be used.

(2.3) We will design a novel deep learning architecture i.e. neural network for the purpose of blind image restoration. Input of newly designed neural network will be blurred image and output will be restored image.

(2.4) Also used transformer mechanism for deep learning architecture i.e. neural network created in task (2.3). This neural network will be trained on dataset generated by GAN. and multi-generator GAN will be trained on existing blur parity dataset.

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WEDNESDAY

MAY

2022

04

"Papers"

on

- 8 (1) one paper can be written for tasks (2.1) & (2.2).
- 9 (2) one paper can be written on task (2.3) & (2.4).
- 10 (3) one paper can be written on all tasks (2.1), (2.2) (2.3), (2.4) i.e. end-to-end approach.
- 11 (4) another can be written on survey of multi-generator GANs.
- 12 (5) one last paper can be written on survey of deep learning architecture used for blind image restoration.

"Deep learning framework & language"

Either 'TensorFlow' or 'PyTorch'

PyTorch
↓

specific version: python3.10 +

05

THURSDAY

MAY

2022

MAY						
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"Extra/Additional"

(i) We can also make our model used for blind image restoration publicly available, name will be "dabblur (anything model)" (DAM).

Idea derived from the "segment anything model" (SAM) published by "Meta".

But for the "DAM", we have to remove our restriction of specific domain related images only. We have to use image from various domains for training of neural network.