The **first and third Model**s have used the same dataset that we will be using and at the end, we will be required to compare our model's performance with theirs.

1. ((PDF) An Improved Dense CNN Architecture for Deepfake Image Detection) :

    - Size = (160, 160)
    - Batch_size = 64
    - Data Augmentation parameters-
        - Rescaling
        - Random rotation (0 to 360)
        - Horizontal flip
        - Vertical flip
        - Shear range (0.2)
        - Zoom range(0.2)
        - Width and height shift by 0.2
    - Used 5K real and 5K fake images to balance dataset
    - 60% for training, 10% for validation and 30% for testing
    - Took 70% from each real image source(i.e 1750 from each source thus 3500 in total) and similarly 70% from each GAN generated deepfake(i.e 700 from each GAN generated deepfake thus 3500 in total)
    - Achieved an accuracy of 97.2% on test data
    - Doesn't generalise well on deepfakes generated by other GANs, about 77% accuracy (avg)

2. Deep Learning Based One-Class Detection System for Fake Faces Generated by GAN Network :

    - Size = (256, 256)
    - Batch_size = not mentioned
    - Data Augmentation parameters-
        - Gaussian Blur
        - Gaussian Noise
        - Homomorphic filter enhancement
    - Used self-attention layer as well
    - 12K real images (FFHQ) and 12K fake images generated by ProGAN
    - Achieved 99.4% accuracy but 87-90% accuracy on deepfakes generated by other GANs

3. The Face Deepfake Detection Challenge (refer section 4.1):

    - Size = (128, 128)
    - Batch size = 64
    - Data Augmentation parameters- (used Albumentations library)
        - Image compression: images were compressed with the JPEG algorithm, at a quality factor picked uniformly in the range [50, 99];
        - Noise addition: images were corrupted with additive Gaussian noise, with variable limit in range [10.0, 50.0];
        - Blurring: Gaussian blurring was applied to the images, with blur a limit of 3, and sigma limit of 0;

    - Flipping: both horizontal and vertical flipped versions of each image were generated;
    - Resizing: images were scaled by the following size [180, 256, 300, 384, 512];
    - Random blackout: a region around the mouth, nose or eyes was randomly replaced with a black rectangle.
- Used 10K real and 5K fake images and tried balancing the dataset by creating 5 augmented images per real image and 10 augmented images per fake image.
- Total number of images - 115K after augmentation

4. (PDF) Investigating the impact of preprocessing and prediction aggregation on the DeepFake detection task (researchgate.net)

- Data Augmentation parameters -
    - horizontal and vertical flipping,
    - random cropping,
    - rotation, compression,
    - Gaussian and motion blurring,
    - brightness, saturation, and contrast transformation
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