

HW2P2

Face Recognition (ResNet – 34) (Run Face Recognition.ipynb)

Accuracy: 87.78%

Implementation Details:

- Embedding stem (3 -> 64)
- 4 stages, 64 -> 128 -> 256 -> 512)
- Optimizer – SGD with Nesterov
- Loss – Cross entropy with label smoothing as 0.25
- LR Scheduler – Cosine Annealing (base LR = 0.1)

Experimented with various augmentation techniques:

1. Horizontal flip
2. Random Augment
3. Random Perspective
4. Color Jitter

Also calculated the mean and standard deviation of the training data separately to normalize all the values across the 3 channels.

Face Classification (ConvNext) (Run Face Verification.ipynb)

Verification Score (AUC): 0.96699

Implementation Details:

- Embedding stem (3 -> 96)
- Stages (96 -> 192 -> 384 -> 768)
- Optimizer – SGD with Nesterov
- Loss – Cross Entropy with label smoothing
- Epochs - 55

Experimented with various augmentation techniques:

1. Horizontal flip
2. Random Augment
3. Random Perspective
4. Color Jitter
5. Random Rotation
6. Random Erasing

