

Computer Vision Track

Assignment - 1

Models Experimented

Model Name	Reason
DenseNet	The intuition behind choosing this model is that DenseNet tends to preserve the input features as depth of model increases due to skip connection, which eventually gives really great results in medical domain
ResNet	This is standard model used in the medical deep learning literature and is known to be achieve good results when fine tuned on medical images
EfficientNet	Recently, this model was one of the state of the art models on ImageNet. I wanted to test the performance of this model on the datasets in comparison to other models. Hence, I chose this as one of the models.

For assignment - 1, the reason behind preferring these models is based on the literature survey and articles I mostly read related to deep learning and medical imaging, where in, they are some of the most common models used because of their good performance in medical domain, especially for medical classification, which is the problem statement.

Assignment - 2

Semi-Supervised Learning

Main Paper implemented on ChestXRay dataset - <https://arxiv.org/abs/1905.02249>
(MixMatch)

Additional papers read

a) Self-Training

- i) <https://arxiv.org/abs/1911.04252>
- ii) <https://arxiv.org/abs/1911.04252>

b) Consistency - Regularization

- i) <https://arxiv.org/abs/1610.02242>
- ii) <https://arxiv.org/abs/1703.01780>

c) Hybrid Models

- i) <https://arxiv.org/abs/2001.07685>