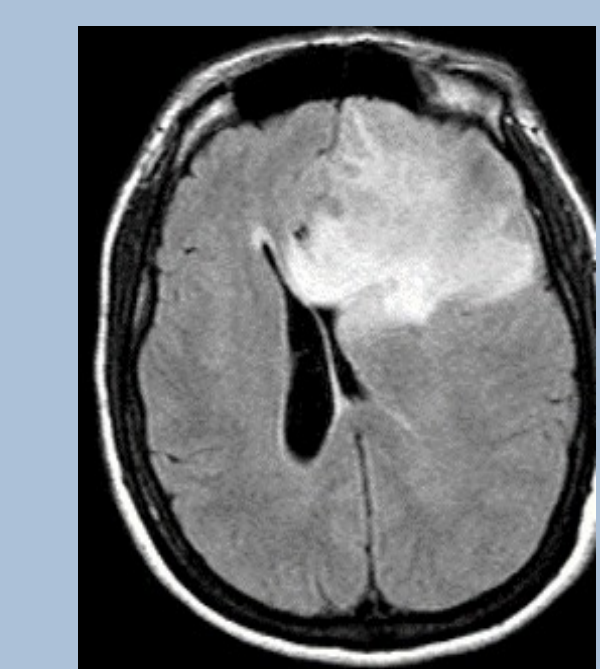


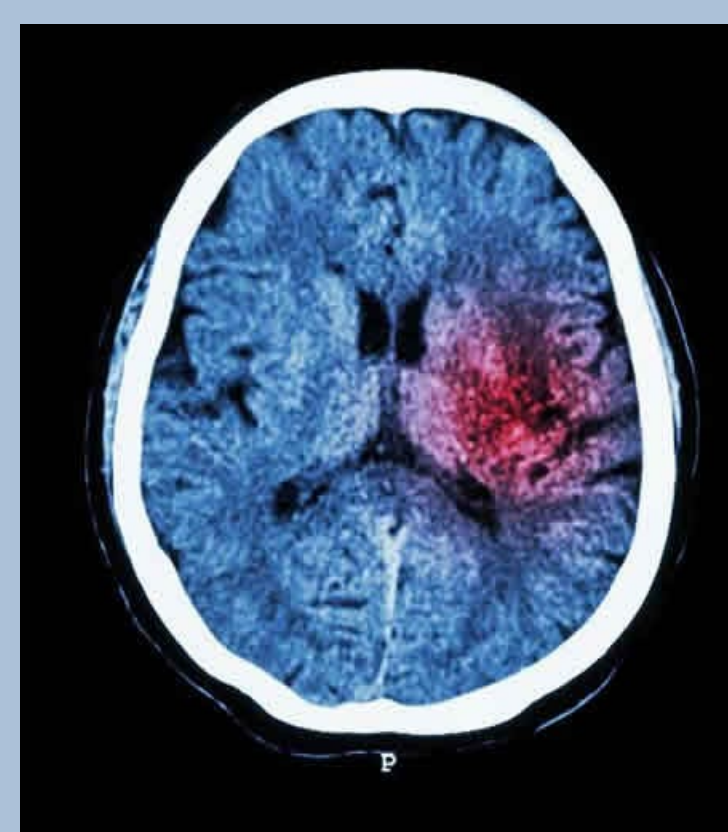
Introduction



Glioblastoma



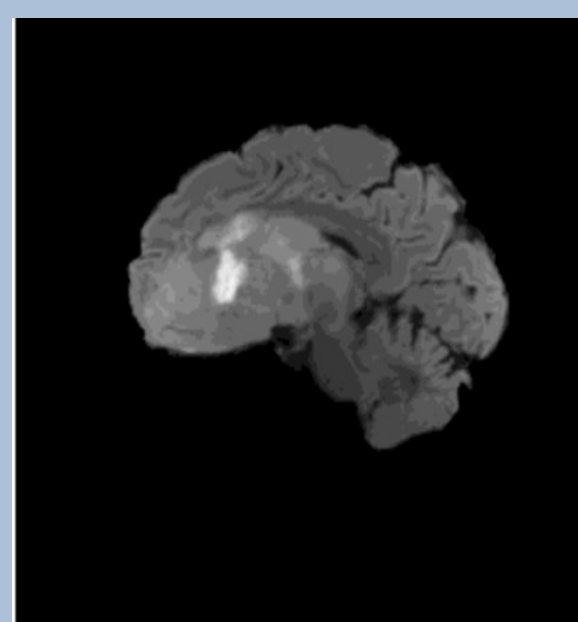
Traditional Method
Extract tissue



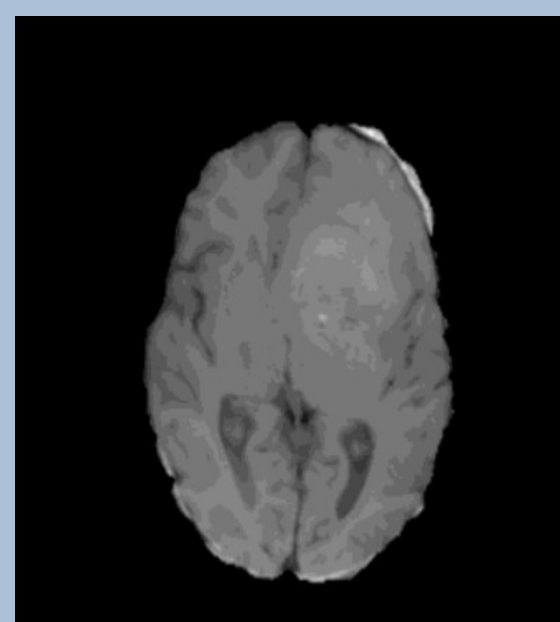
Advanced Method
MRI & deep learning models to detect MGMT DNA

Material

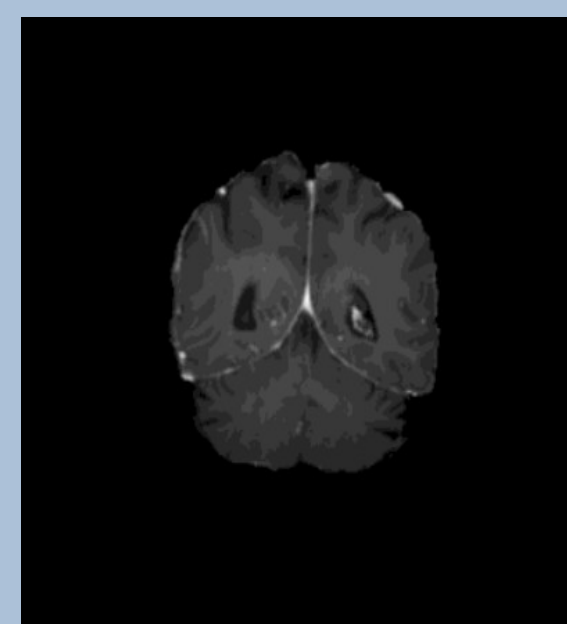
MRI scans (DCM):



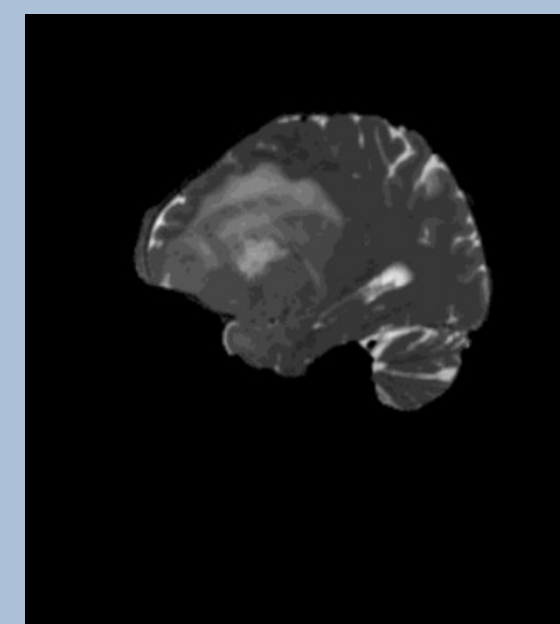
FLAIR



T1W

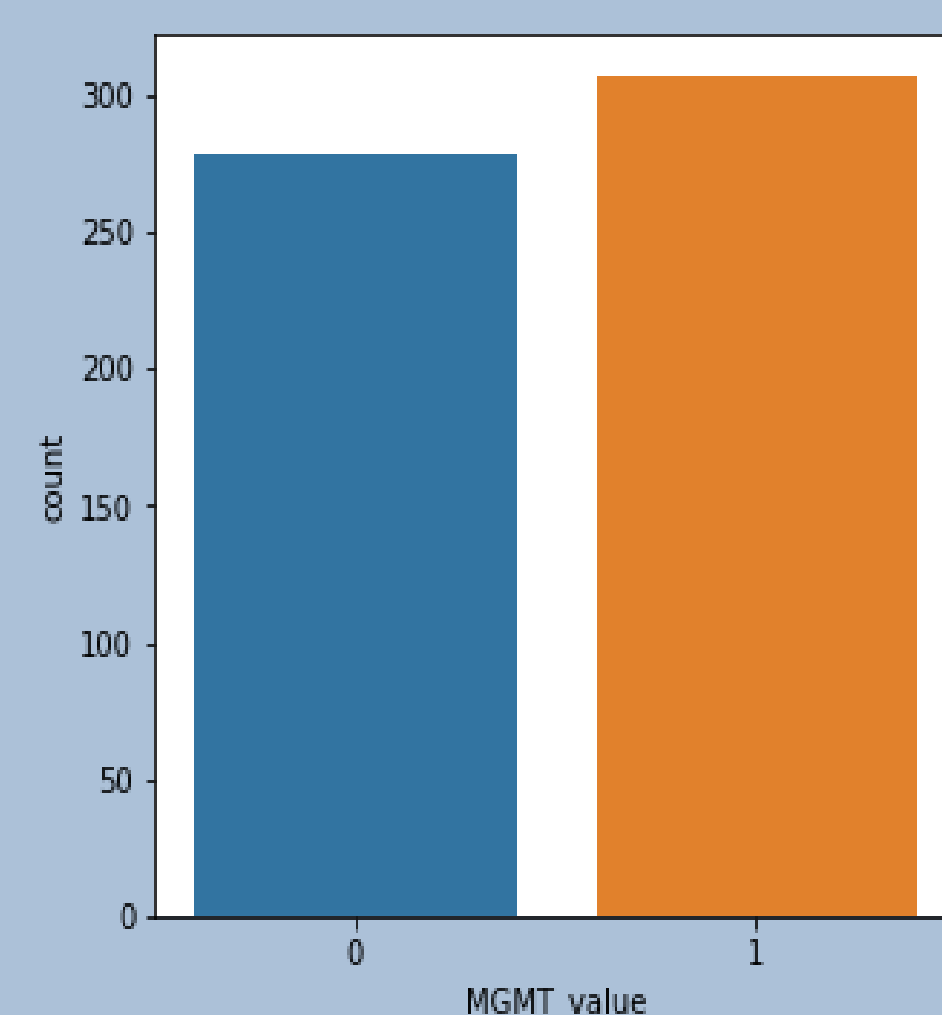


T1WCE



T2W

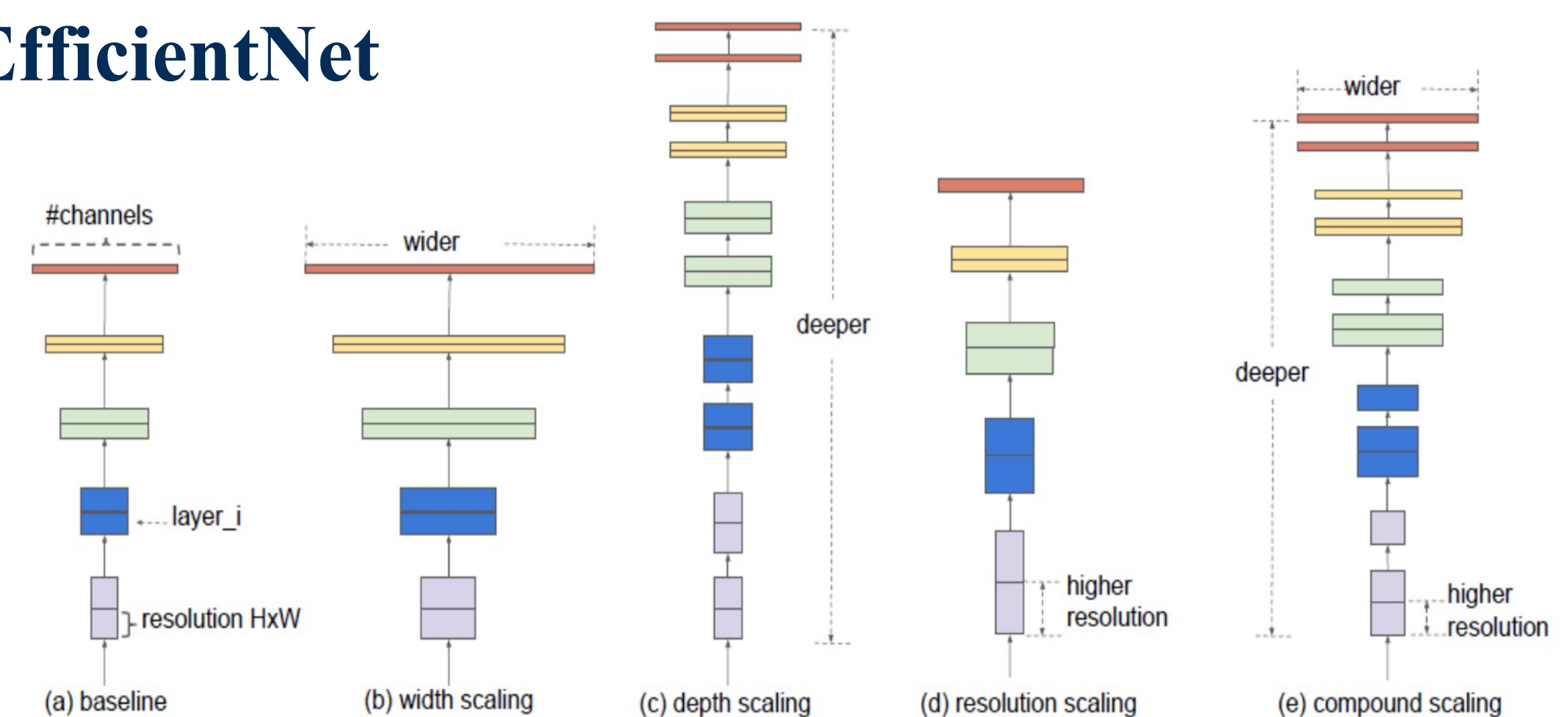
MGMT value:

Patient
without
MGMTPatient
with
MGMT

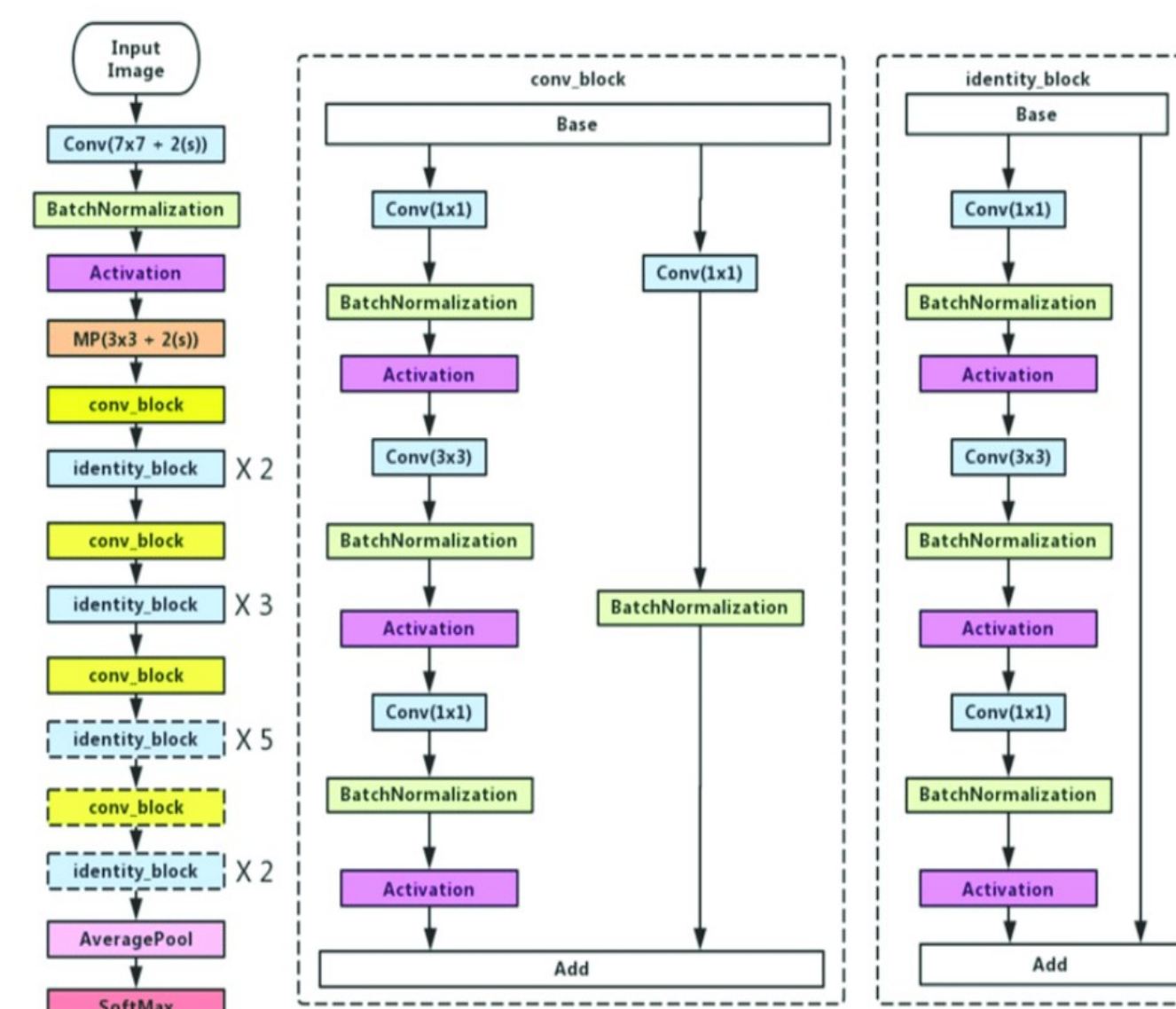
Method

We compare 2 popular deep learning methods:

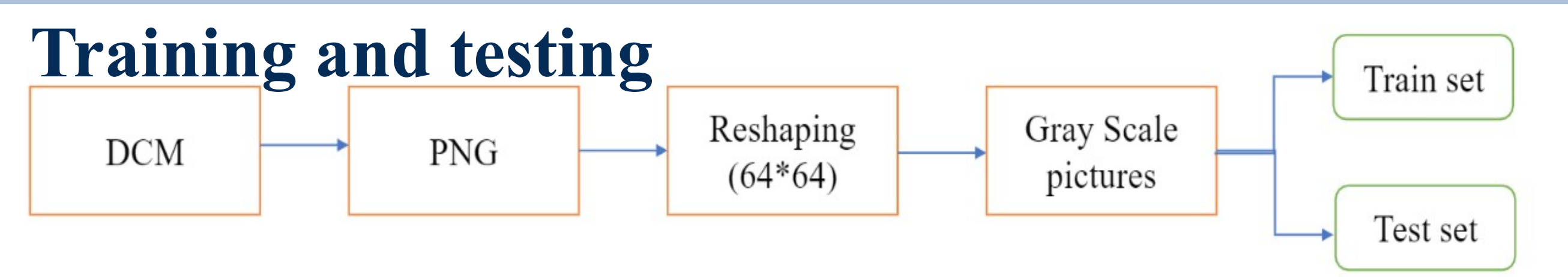
EfficientNet



Resnet

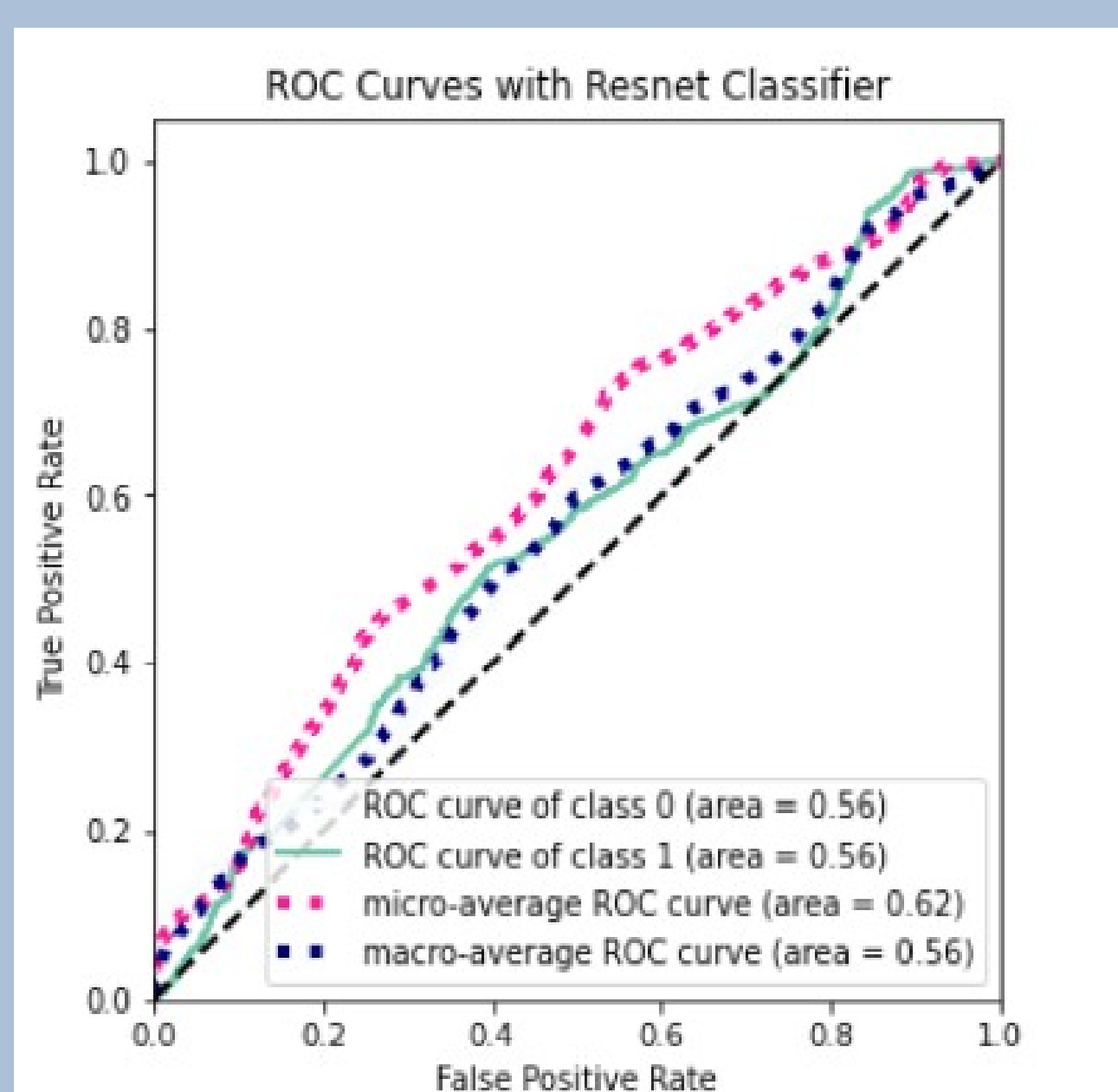


Training and testing

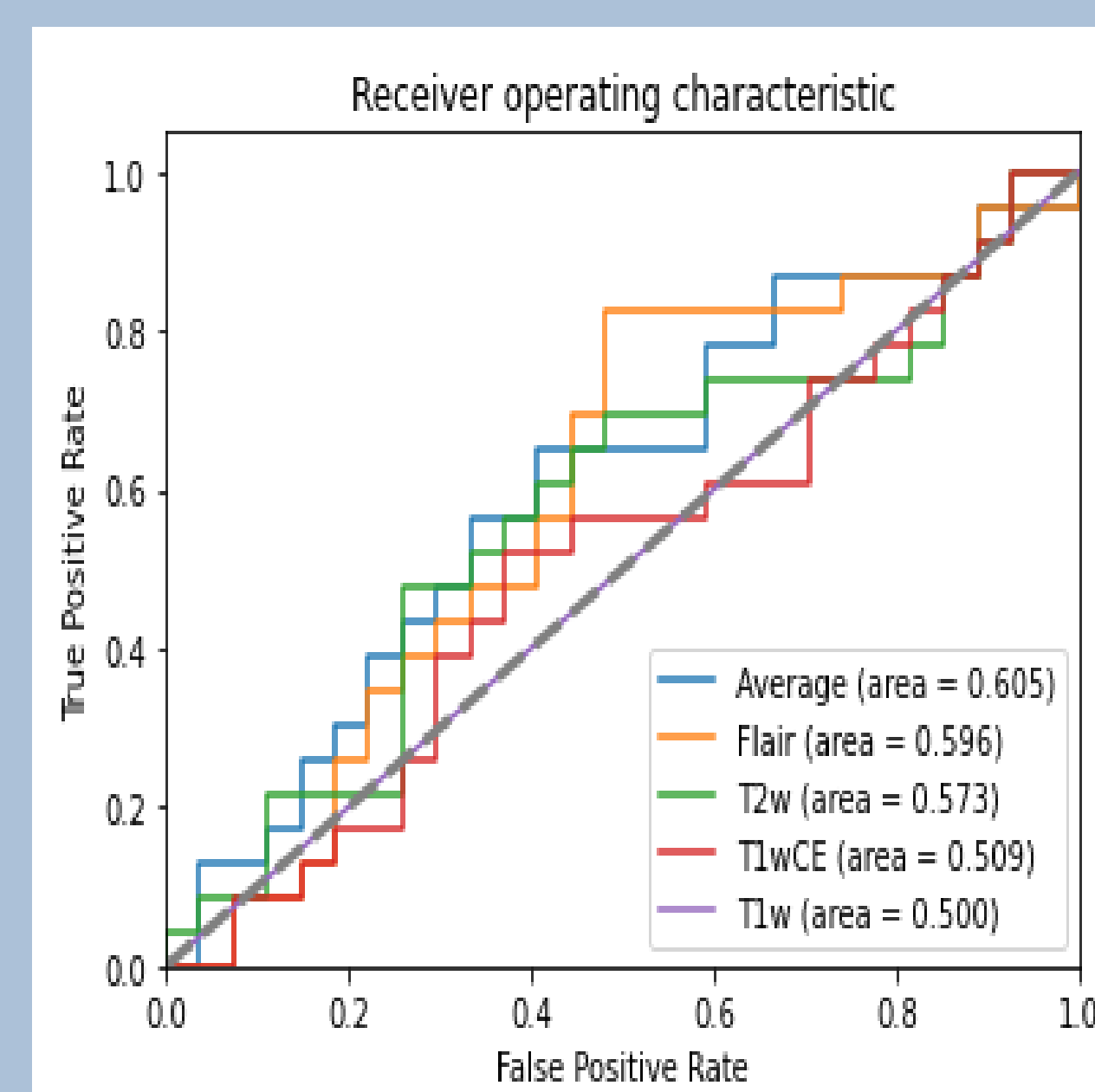
**Input:** 4 types of data into 2 models respectively**Output:** predicted MGMT value**Models:** 10 (For each method, we will get 4 models/each type, and a average model among the four.)

Result & Conclusion

Resnet



EfficientNet



The best EN model is to input FLAIR, T1wCE and T2w data types respectively and take the average of the results.

The best RN model is also the average one, as shown in figure.

The AUC of EN (0.605) is bigger than RN's (0.560). EfficientNet is the best model.



SCAN ME