

This research work is focused on detecting low-grade glioma tumorous cells in MRI images. Glioma is a common brain tumor, that exhibits properties of benign tumors [1]. We used the TCGA-LGG Segmentation dataset [2] for our research. It consists of 3929 brain tumor images and corresponding FLAIR abnormality segmentation masks obtained from 110 patients. Table 1 lists the models used as encoder for U-Net architecture.

Family	Models	Trainable Blocks
EfficientNet	EfficientNetB0 to B7	Block 30 to 32
DenseNet	DenseNet169, DenseNet201	Block 7
ResNet	ResNet18, ResNe50t50	Stage 4

Table 1: Models used for U-Net encoder and trainable blocks/stages for fine-tuning.

References

- [1] A. Wadhwa, A. Bhardwaj,, V.S Verma "A review on brain tumor segmentation of mri images," Magnetic resonance imaging vol.61 pp. 247-259,2019.
- [2] M. Buda, A. Saha, and M. A. Mazurowski, "Association of genomic subtypes of lower-grade gliomas with shape features automatically extracted by a deep learning algorithm," Computers in biology and medicine, vol. 109, pp. 218-225, 2019