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.

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

Family	Model	Trainable Blocks
EfficientNet	EfficientNetB0 to B7	Block 30 to 32
DenseNet	DenseNet169, DenseNet201	Block 7
ResNet	ResNet18, ResNet50,	Stage 4
	ResNet101	

References

- [1] A. Wadhwa, A. Bhardwaj, and 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," <u>Computers in biology and medicine</u>, vol. 109, pp. 218–225, 2019.
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