

# Review of our Model

Our team has used a CNN Model which in comparison to probabilistic neural networks offers lesser computational time. CNN models are generally used for Image processing and segregation as it can easily learn to distinguish between images. It produces the forecast by reducing the image into features without losing the necessary information to make the prediction correctly.

Our model has about 9 convolutional layers, 1 flattening layer, a dense layer and finally an output layer.

The 9 convolutional layers help us to extract more features from the images.

The proposed model classifies the tumors into **four types**. The types being, **Glioma tumor, Meningioma tumor, Pituitary tumor, and finally No tumor**.

Existing models and their individual accuracies:

Models	Accuracy
InceptionResNetv2	0.9130
Inceptionv3	0.8804
ResNet50	0.9348
BRAIN-TUMOR-net	0.8478

But in **these models** classification is done into **two groups**, them being **Tumor and No tumor**.

Proposed Model specifications:

**Accuracy: 0.93**

**Computational Time (Training): 200 s (In Kaggle GPU T4x2)**

## Conclusion:

We saw that our proposed CNN Model has more accuracy over other existing data models. Our data set size is comparable to the data set used in these models to gather the accuracy. These models classify the tumor into two groups while the proposed model does it into four groups.

References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9752904/#:~:text=Different%20pre%2Dtrained%20deep%20learning.%2DTUMOR%2Dnet%20from%20scratch>