

Project Documentation

1) Cover sheet

Faculty name: FAcI Helwan

Course name: Selected Topics CS2

Team number: 23

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2) Paper details:

- **Authors name:** Pallavi Tiwari,1 Bhaskar Pant,1 Mahmoud M. Elarabawy , 2 Mohammed Abd-Elnaby , 3 Noor Mohd , 1 Gaurav Dhiman , 1 and Subhash Sharma 4
- **paper name:** CNN Based Multiclass Brain Tumor Detection Using Medical Imaging.
- **year of publication :** 21 June 2022
- **The dataset used:** Brain Tumor MRI Dataset.
- **the implemented algorithms:** Multi-class classification using CNN or pre-trained models.
- **its results:** Accuracy 99%

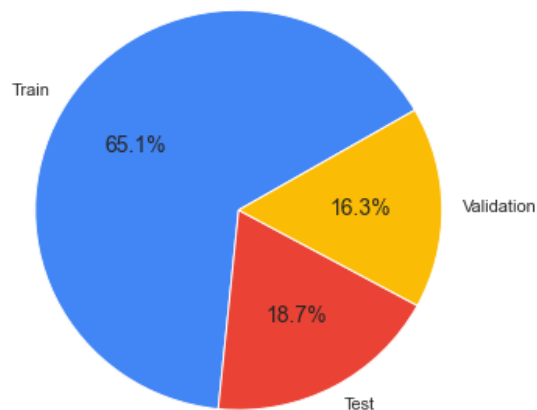
3)Project Description Document:

A) General Information on the selected dataset:

- **The name of the dataset:** Brain Tumor MRI Dataset.
- **The link of dataset:**
<https://www.kaggle.com/datasets/masoudnickparvar/brain-tumor-mri-dataset?select=Training>
- **The total number of samples in the dataset:** 8165
- **The dimension of images:** (224,224,3)
- **Number of classes:** 4
- **Their labels:** ['glioma', 'meningioma', 'notumor', 'pituitary']

B) Implementation details:

- **Training:** 5712 samples
- **Validation:** 1142 samples
- **Testing:** 1311 samples



C) Hyperparameters:

- Optimizer --> Adam
- epochs --> 10

D) Results details:

Accuracy Score--> 91%

Accuracy prediction--> 92%

Block Diagram

