## **About Dataset**

### ****Brain Tumor Dataset****

This dataset contains simulated data for brain tumor diagnosis, treatment, and patient details. It consists of 20 columns and 20,000 rows, providing information such as patient demographics, tumor characteristics, symptoms, treatment details, and follow-up requirements. The dataset is designed for machine learning projects focused on predicting the type and severity of brain tumors, as well as understanding various treatment methods and patient outcomes.

#### ****Columns:****

1. ****Patient\_ID****: Unique identifier for each patient.
2. ****Age****: Age of the patient (in years).
3. ****Gender****: Gender of the patient (Male/Female).
4. ****Tumor\_Type****: Type of tumor (Benign/Malignant).
5. ****Tumor\_Size****: Size of the tumor in centimeters.
6. ****Location****: The part of the brain where the tumor is located (e.g., Frontal, Temporal).
7. ****Histology****: The histological type of the tumor (e.g., Astrocytoma, Glioblastoma).
8. ****Stage****: The stage of the tumor (I, II, III, IV).
9. ****Symptom\_1****: The first symptom observed (e.g., Headache, Seizures).
10. ****Symptom\_2****: The second symptom observed.
11. ****Symptom\_3****: The third symptom observed.
12. ****Radiation\_Treatment****: Whether radiation treatment was administered (Yes/No).
13. ****Surgery\_Performed****: Whether surgery was performed (Yes/No).
14. ****Chemotherapy****: Whether chemotherapy was administered (Yes/No).
15. ****Survival\_Rate****: The estimated survival rate of the patient (percentage).
16. ****Tumor\_Growth\_Rate****: The growth rate of the tumor (cm per month).
17. ****Family\_History****: Whether the patient has a family history of brain tumors (Yes/No).
18. ****MRI\_Result****: The result of the MRI scan (Positive/Negative).
19. ****Follow\_Up\_Required****: Whether follow-up is required (Yes/No).
20. ****Treatment\_Response****: The response to the treatment (Improved/Worsened/Stable).

#### ****Intended Use:****

This dataset can be used for various machine learning tasks, such as:

* ****Tumor classification****: Predicting whether a tumor is benign or malignant.
* ****Survival analysis****: Estimating the survival rate based on different features like tumor type and treatment.
* ****Outcome prediction****: Predicting the treatment response or follow-up requirement.