



# Brain Tumor Distribution Analysis –

## Power BI Dashboard



### About the Project

This project is a **complete end-to-end Power BI dashboard** built from scratch, following a real-world analytics workflow.

It demonstrates how raw healthcare data can be transformed into a **professional, interactive, and portfolio-ready dashboard** using Power BI.

The dashboard focuses on analyzing **brain tumor distribution** across:

- Age groups
- Tumor grades
- Tumor types
- Brain regions
- Year-wise diagnosis trends

This project reflects industry-level dashboard design, data modeling, and storytelling practices used by professional data analysts.



### Project Objective

To design a structured and visually engaging Power BI dashboard that helps users:

- Understand tumor distribution patterns
- Identify the most affected age groups and brain regions
- Analyze trends over time
- Gain actionable insights from complex medical data



## What You Will Learn

- ✓ Build a complete end-to-end **Power BI dashboard** from scratch
- ✓ Clean, transform, and prepare data using **Power Query**
- ✓ Design a structured and scalable **data model**
- ✓ Create **KPIs and analytical measures**
- ✓ Use **DAX fundamentals** for calculations and insights
- ✓ Design professional, **real-world Power BI dashboards**
- ✓ Create **interactive visuals, slicers, and filters**
- ✓ Apply **UI/UX best practices** for dashboard layout
- ✓ Analyze **trends and patterns** using Power BI visuals
- ✓ Apply **data storytelling** techniques
- ✓ Optimize Power BI reports for **performance and readability**
- ✓ Develop **portfolio-ready** Power BI projects
- ✓ Approach analytics problems with an **analyst mindset**

## 🛠 Tools & Technologies

- Power BI
- Power Query
- DAX
- Data Modeling
- Data Visualization
- UI/UX for Dashboards
- Healthcare Analytics



## Dashboard Features

- KPI Cards with Sparklines
- Donut Chart for Tumor Type Distribution
- Clustered Bar Chart for Brain Region Analysis
- Line Chart for Annual Diagnosis Trend
- Clustered Column Chart for Age Group Analysis
- Button Slicers & Custom Marketplace Slicers
- Embedded Medical Images
- Custom Dashboard Background (Wallpaper)

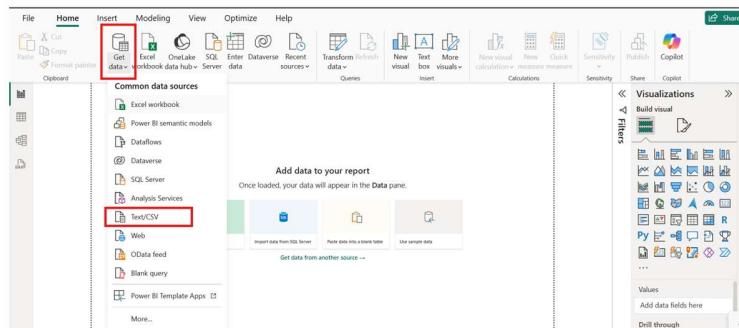


## Project Workflow (Step-by-Step)

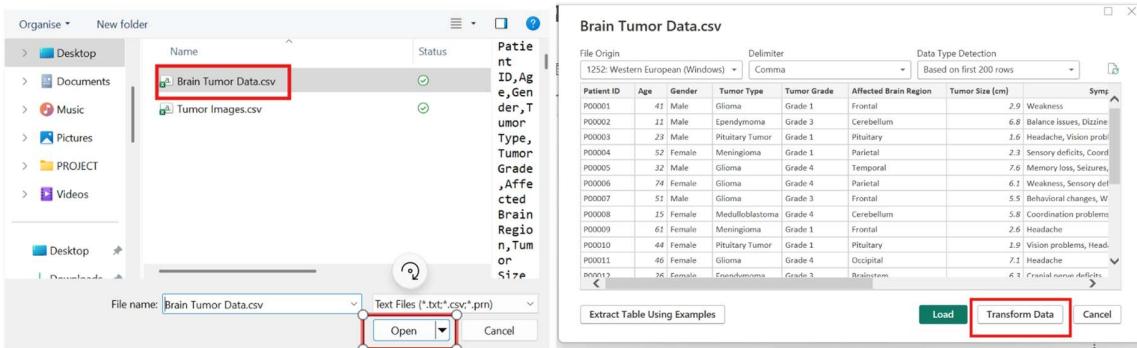
### 1. Import & Transform Dataset in Power BI

Note: Follow the steps given below

(A) Get data → Text/CSV



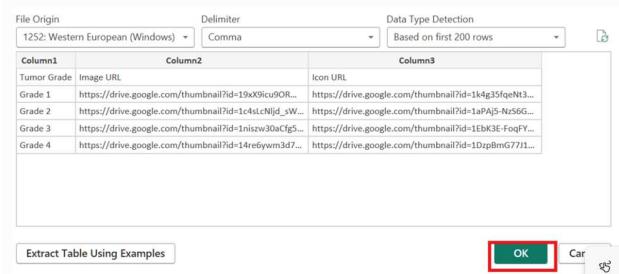
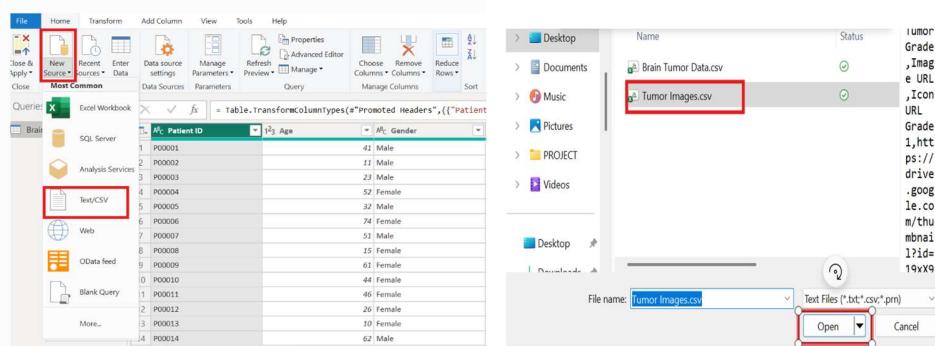
(B) Select the data downloaded in your folder → Click on open File → Transform Data



(C) After Transform Data → You will see new page as shown below

Click on New Source → Text/CSV → Choose the file named **Tumor Images.csv**

Then Click on → Okay → Then Click on **Close & Apply option** shown on Top Leftmost Corner.

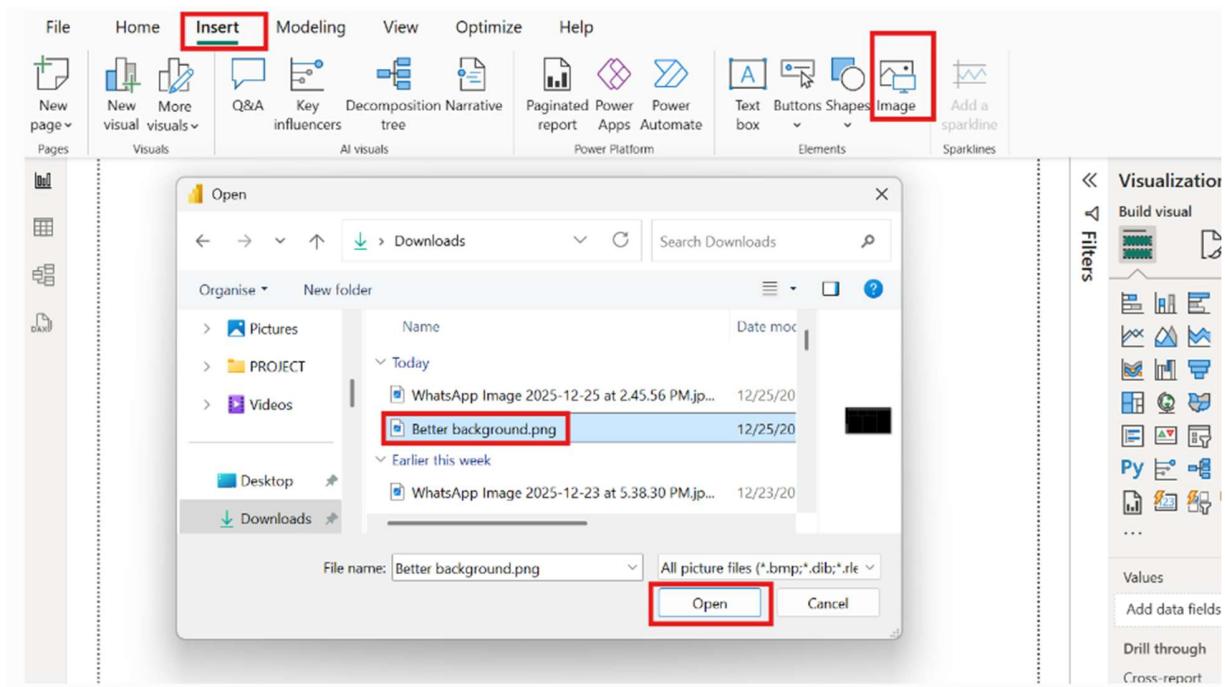


## 2. Brain Tumor Dataset Overview

## 3. Data Cleaning & Preparation using Power Query

Click on Insert → Image → Select **Better background.png** file available in the **Data folder**

Then Click on Open → Start designing



#### 4. Create Data Model & Relationships

#### 5. Create KPI Card Visuals

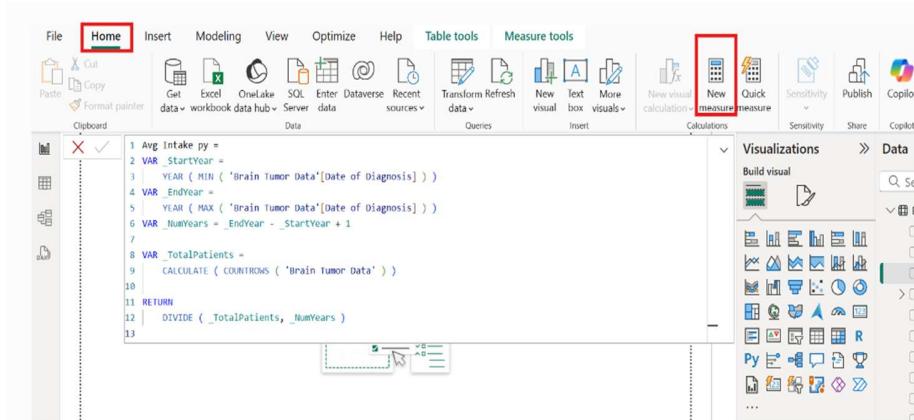
#### 6. Add Sparklines to KPI Cards

#### 7. Create DAX Measures

Note: Formula is available in text file

→ Steps to upload DAX Measures → Copy Formula from **Formula.txt**

Then Paste in Measures box, then click → enter → Click cross mark(red color)



```
1 Avg Intake py =
2 VAR _StartYear =
3 |   YEAR ( MIN ( 'Brain Tumor Data'[Date of Diagnosis] ) )
4 VAR _EndYear =
5 |   YEAR ( MAX ( 'Brain Tumor Data'[Date of Diagnosis] ) )
6 VAR _NumYears = _EndYear - _StartYear + 1
7
8 VAR _TotalPatients =
9 |   CALCULATE ( COUNTROWS ( 'Brain Tumor Data' ) )
10|
11 RETURN
12 |   DIVIDE ( _TotalPatients, _NumYears )
13
```

8. Create Button Slicers

9. Import Custom Slicers from Marketplace

10. Insert Images into Dashboard

11. Donut Chart Creation & Formatting

12. Clustered Bar Chart Creation & Formatting

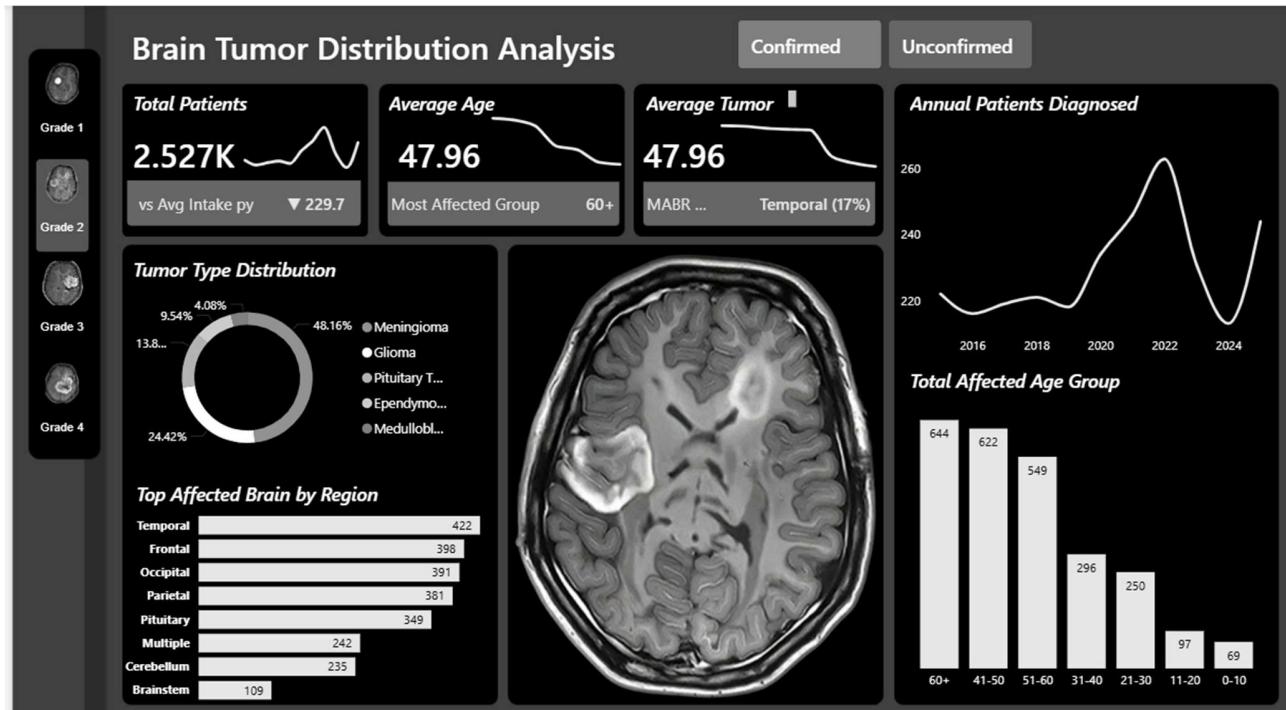
13. Line Chart Creation & Formatting

14. Clustered Column Chart Creation & Formatting



# Dashboard Preview

Add your dashboard image here



Author

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