

22nd August, 2023

DATATHON CHALLENGE



TECH-TRIATHLON

A competition by rootcode

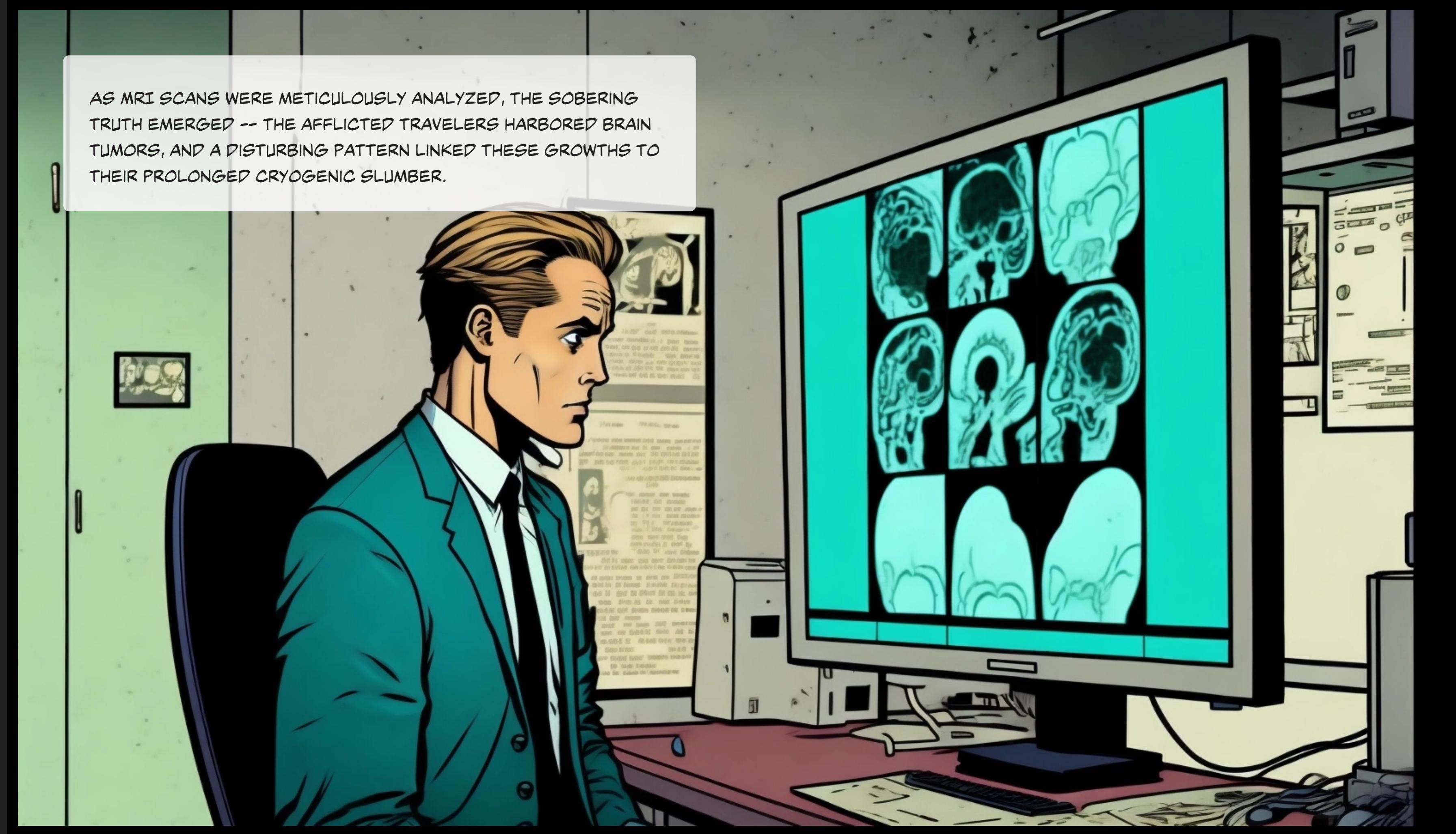


WITH TIME, INDIVIDUALS OF VARYING AGES, GENDERS, RACES, AND INCOME LEVELS ALL EMBRACED THE COSMIC CALLING. THE YOUNG AND THE OLD ALIKE DREAMED OF VENTURING BEYOND THE STARS, TO QUENCH THEIR THIRST FOR KNOWLEDGE AND ADVENTURE.



HOWEVER, NOT ALL WHO EMBARKED ON THESE COSMIC JOURNEYS FOUND THEMSELVES CELEBRATING THE EXPERIENCE. REPORTS OF UNBEARABLE HEADACHES DURING AND AFTER INTERPLANETARY TRAVELS CIRCULATED AMONG THE ADVENTUROUS PIONEERS.

AS MRI SCANS WERE METICULOUSLY ANALYZED, THE SOBERING TRUTH EMERGED -- THE AFFLICTED TRAVELERS HARBORED BRAIN TUMORS, AND A DISTURBING PATTERN LINKED THESE GROWTHS TO THEIR PROLONGED CRYONIC SLUMBER.



The Challenge

Further investigation reveals that there are three distinct types of tumors. The tumors grow slowly and are initially difficult to detect, but as they progress, they can cause a range of symptoms, including memory loss, hallucinations, and motor function impairment.

The interplanetary travelers will be given regular medical checkups to screen for the presence of tumors. Those who test positive can be treated with a combination of surgery and targeted radiation therapy, which has proven to be highly effective in halting the growth of the tumors.

Your team will be responsible for devising a solution to detect brain tumors using MRI Scans of the travelers. You will be given a dataset of over 3000 images obtained from interstellar travelers, which are classified into four folders.

Your task is to construct a Deep Neural Network capable of detecting these tumors

Deliverables

1. **Architecture Diagrams:** Present any model architectures, preprocessing architectures or deployment architectures you have sketched.
2. **Classification Model:** Provide the final trained model in .h5 or .pkl format.
3. **Notebook:** Submit all the notebooks used for experimentation and data preprocessing as .ipynb files. Please mark the final notebook with your best performing model as ***TeamName_FinalNotebook.ipynb***.
4. **Demo Video:** Upload a 3 to 5-minute demo video on YouTube. This video should provide a walkthrough of your model architecture, data preprocessing steps used and the problems you encountered and how you overcame them.

Please add your model architecture diagrams, classification model, and notebooks into one folder. Afterward, compress this folder into a zip format, ensuring it retains the name ***TeamName_Datathon.zip***. Upload the zip file to Google Drive and provide the ***public access link*** in the submission form.

Deadline for submissions: **25th August, 2023 at 11.59 PM**



Submission Form: <https://forms.gle/82zqQKeK8GCMpqEE8>

Rules and Regulations

- The form will stop accepting responses after the deadline.
- You are not allowed to use any pre-trained models with weights.
- Any model architectures used in the datathon should be implemented from scratch.
- If the team found to have cheated, plagiarized or violated the rules of the competition will be disqualified.
- By participating in this competition, teams agree to be bound by these rules and regulations and by the decisions of the judges, which are final and binding in all respects.

Judging Criteria

- Data Wrangling - 15%
- Model Implementation - 35%
- Classification Performance Score - 30%
- Demo Video - 20%

Wish you all the best!