Project Design Phase-I

Proposed Solution Template

Date	27 September 2022
Team ID	PNT2022TMID19548
Project Name	Project - Analysis of Brain Tumor Detection and Segmentation
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	In medical side, the difficulty of division and their nuclei from content of MRI image can be faced by the radiologists. At present, the segmentation from MRI image can be a challenging difficulty due to structure and location in human body when using a multi-modal imaging data. The main challenges of tumor detection are less of accuracy to detect tumor area and to segment the tumor area.
2.	Idea / Solution description	The image segmentation can be the essential complexity in tumor recognition in MRI image. But the tumor segmentation of separation task can be very essential to recognize the tumor and efficient diagnosis.
3.	Novelty / Uniqueness	Quantitative and qualitative data about the beign tumor can be given by the proper segmentation process and it can be utilized to recognize what are the good treatments for patient and to get the better plan by doctor who treats the patient. Effective tumor detection can be happened when image analysis is going to be easy for understanding and segmenting.
4.	Social Impact / Customer Satisfaction	Dimensionality reduction that can indicate the important parts of the medical image as a feature vector. While large image sizes are used, this approach will be decreased feature demonstration can be needed to rapidly finish the processes like matching and retrieval of MRI image. From every MRI, four kinds of features can be extracted such as symmetry, intensity, texture and shape deformation depending on the some filtering methods.

5.	Business Model (Revenue Model)	MRI is used to diagnose and analyze many diseases such as tumors, neurological diseases, epilepsy, etc. Usually, a system completely processed by hardware/computer helps automate this process to obtain accurate and fast results.
6.	Scalability of the Solution	Numerous algorithms and methods have been presented for manual, semi and fully automated tumor segmentation due the complicated tumor segmentation process in MRI image.