

SEMESTER SEP 2019-JAN 2020
CSC566: IMAGE PROCESSING

SEMESTER	:	SEPT 2019 – JAN 2020
COURSE	:	IMAGE PROCESSING
COURSE CODE	:	CSC566
PROJECT TITLE	:	Brain Tumor Segmentation

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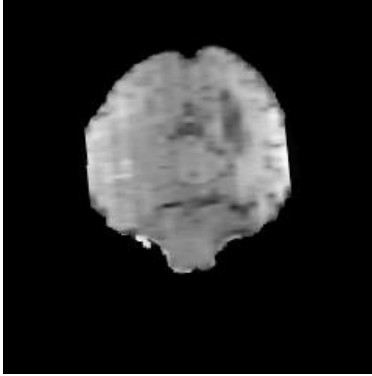
TEMPLATE FOR PROJECT GRADING

Each group should complete and print this sheet. The reports along with datasets and codes should be attached in Google Drive.

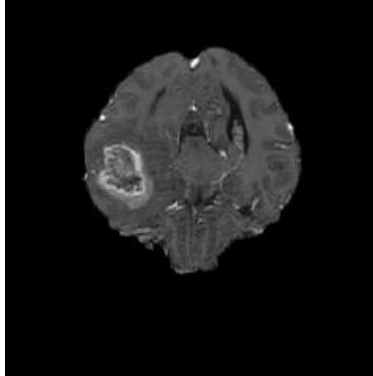
ITEMS	Percentage	MARKS
1. Introduction & project significance	5%	
2. Depth of algorithm a) Sequence b) Flowchart c) Usage of data	15%	
3. Performance a) Specificity b) Sensitivity c) Precision	15%	
4. Bonus points a) Presentation of report b) Additional/Extra features	5%	
TOTAL MARKS	40%	

Task: Brain Tumor Segmentation

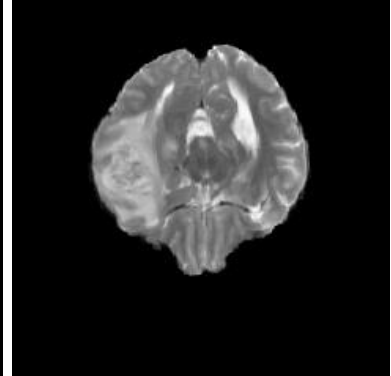
1. You have been assigned with a dataset containing 4 different imaging modalities of brain MRI (Magnetic Resonance Imaging). The example images assigned are as follows:



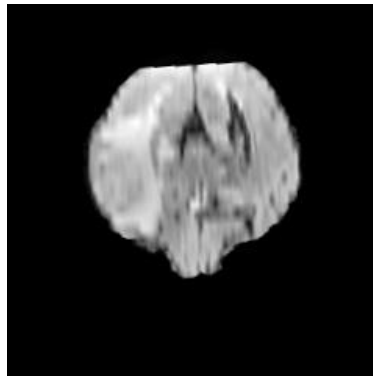
T1-Slice 65



T1CE-Slice 65

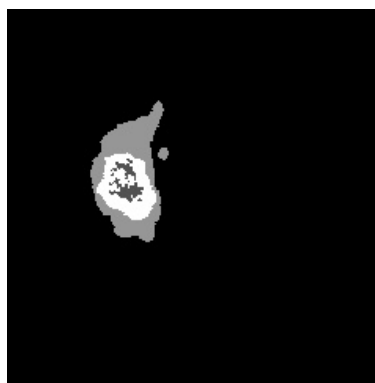


T2-Slice 65



Flair-Slice 65

2. Notice that each modality contains different information, which can be utilized in order to segment brain tumor as follows:



Segmentation-Slice 65

3. A sample training dataset containing 15 images from T1, T1CE, T2, Flair, and Segmentation will be given as reference for students to study the features of brain tumor that needs to be segmented.
4. Design a segmentation algorithm that can produce the Segmentation data by using all four modalities. This algorithm should be able to produce all 15 different segmentation variations of the dataset assigned.

5. A testing dataset containing 15 images T1, T1CE, T2, and Flair modality is given without the segmentation data. Use your algorithm to process the testing dataset and save all 15 segmentation images in a folder. These images will be employed to test the performance of your algorithm.
6. Write a report of your research by using the “**TEMPLATE FOR PROJECT GRADING**” in page 2.
7. Good luck everyone!