1. Install the following packages with command pip install <packagename>

import nibabel as nib

import numpy as np

import pandas as pd

import os

import glob

import datetime

import warnings

from scipy.sparse import coo\_matrix

from matplotlib import pyplot as plt

import seaborn as sns

from tensorflow.keras.models import Sequential

from tensorflow.keras.layers import Dense

from sklearn.metrics import classification\_report, confusion\_matrix

from sklearn.utils import resample

import sklearn.metrics as metrics

Note: step 2 and 3 are optional (as one time run already done)

2. run the py file niipreprocess11.py

3. run the py file main11.py (one time run for generating csv files from NIfTI nii files including the class label mapping)

Dependency: spet2 must be run before step3

Currently all the csv files already generated. so step 2 and 3 are optional and step 3 is time takes two hrs to run

For tumor visualisations – open (or run) the below notebooks:

tumor\_visualisation\_4\_modalities.IPYNB

tumor\_visualisation\_4\_modalities\_v2.IPYNB

For running the MLP Model-A – run the below notebook:

dlmlp.IPYNB

For running the MLP Model-B – run the below notebook:

dlmlp\_fulldataset\_25pct\_balanced.IPYNB (note: runs overnight on 64GB RAM machine)

For running SVM and Random Forest Classifiers – run the below notebook:

mlsvmetc\_gray.IPYNB

For running the Decision Tree algorithm – run the below notebook:

mlsvmetc\_gray.IPYNB