Module 8: TFLearn Assignment

Problem Statement:

Consider yourself to be Jeff, who is a Deep Learning Engineer at a prestigious company. Your company is working with a Cancer Institute to find out what are the factors which lead up to a patient having cancer.

Dataset Used:

diagnosis	radius_mean	texture_mean	perimeter_mean	area_mean	smoothness_mean	compactness_mean
M	17.990	10.38	122.80	1001.0	0.11840	0.27760
M	20.570	17.77	132.90	1326.0	0.08474	0.07864
M	19.690	21.25	130.00	1203.0	0.10960	0.15990
M	11.420	20.38	77.58	386.1	0.14250	0.28390
M	20.290	14.34	135.10	1297.0	0.10030	0.13280
M	12.450	15.70	82.57	477.1	0.12780	0.17000
M	18.250	19.98	119.60	1040.0	0.09463	0.10900
M	13.710	20.83	90.20	577.9	0.11890	0.16450
M	13.000	21.82	87.50	519.8	0.12730	0.19320

Tasks to be Done:

A. Start off by loading the 'breast_cancer' dataset from 'sklearn'
   a. Print the number of samples and number of features in the data
   b. Divide the data into train & test sets with with test set size to be equal to 0.33
   c. Create the network:
      i. Start with the input layer
      ii. Add two hidden layers, where each layer has 32 nodes
      iii. The final layer's activation should be 'softmax'
      iv. Fit the model on the train set
      v. Evaluate the accuracy for train and test set