BT6270: Computational Neuroscience

The details of Assignment-1 are given below

Assignment description:

I have attached the MATLAB code which simulates the Hodgkin Huxley model. You need to run, and modify this code so as to find and/or plot the following:

1. Threshold values for the external applied currents I_1, I_2, and I_3 in which shift of dynamical behavior from one to another is seen, such as *no AP, finite number of AP's, Continuous firing and then followed by distortion resulting in no more APs*.
2. A graph which depicts the firing rate (frequency) as you change the applied external current (i.e. I_{ext} vs. Firing rate (f), as explained by sir in the class). You can make this plot either in Matlab or Python.

General Instructions:

- A valid submission requires a compressed zip or tar file named as "<ROLLNO>A1.zip containing the following files:
  - A detailed one-page report which includes the values asked for, the assumptions made, your observations, the plot required.
  - The Matlab /python code used to generate the plot required (I_{ext} vs f).
  - Any other user defined functions which would be required for this main code to run.
- Please upload, the completed assignment (zip or tar file) in moodle with the subject: " BT6270: Assignment - 1".

Please note the deadline for Assignment-1 is 05/10/2018, 23:59.