Deep Learning
Assignment 1

Instructions:

1. Provide commented, indented code. Variables should have meaningful names.
2. Use Google Colab as the code editing/ execution environment.
3. Write questions in separate text blocks before the code blocks containing answers.
4. Read the questions carefully before answering. If a question asks to follow a particular approach or to use a specific data structure, then it must be followed.
5. Dataset for logistic regression: *https://archive.ics.uci.edu/ml/datasets/Ionosphere*

Tasks:

1. Implement logistic regression from scratch. Do not use the solutions provided by third-party libraries like 'scikit-learn'.
2. Implement k-fold cross validation logic from scratch. Do not use the solutions provided by third-party libraries like 'scikit-learn'.
3. Train a binary classifier for the provided dataset using the implementation created in task 1. Use the k-fold cross validation implementation created in task 2 while training the model. Choose an appropriate value for 'k'. Compute the mean and variance of classification accuracies of all 'k' trained models.

Files to be submitted:

1. .ipynb file containing code named as '*YourName*_*YourRollNo*_Assignment1.ipynb'