LinearRegression Folder:

Data Files:
*linear-regression-train.csv
*linear-regression-test.csv

Code File:
*linearRegression.py

* Run: python linearRegression.py, then the program will print 6 parameters one after another

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LogisticRegression Folder:

Code File:
*logisticRegression.py

* Run: python logisticRegression.py, then the program will print the parameters after two iterations

* Problems and solutions:
    1. Math.exp overflow: whenever the data overflows, I set the value of exp function to be ‘inf’. There are undefined cases, like inf - inf or inf/inf. So, the program runs well in this way.
    2. Hessian matrix is not invertible: add small number to the diagonal of the matrix.

DecisionTree Folder:

Data Files:
*house-votes-84.data

Code File:
*DecisionTree.py

*Run: python3 DecisionTree.py data [0/1, 0-Information Gain, 1-Gain Ratio, default:0]