School of Computer Science and Engineering, VIT Chennai.

CSE2039 Fundamentals of Artificial Intelligence

Lab-3 Linear Regression

Faculty : Dr. R. Jothi

**Due Date : 12/05/2023**

Submit your python code (Jupyter notebook): with output for all the questions.

Regression analysis is one of the most important fields in statistics and machine learning. There are many regression methods available. Linear regression is one of them.

Q1. Implement linear regression algorithm with gradient descent optimization.

* The program should be generic, should work for any dataset
* Print all the predictor variables and dependent variables in the given dataset
* Understand the relationship between each predictor variable and the dependent variable; draw the plot.
* Keep 80% of samples for training and rest for testing
* Print the regression parameters after training.
* Show the accuracy on the test set.

Q2. Use appropriate Scikit/SKlearn Library function to apply linear regression on the given datasets and compare the results with your implementation.

Datasets (uploaded in LMS):

1. Weight-height
2. House price (Use scikit/Sklearn alone)