

Machine Learning - Lab sheet - Module 2

EXERCISE 6 - LINEAR REGRESSION USING GRADIENT DESCENT

1 Objective

The objective is to

- implement linear regression using gradient descent algorithm on a given dataset.

2 Steps to be performed

Tool Python3

Libraries required numpy, matplotlib, pandas, sklearn

Input salary_data.csv

Machine Learning Model Simple Linear Regression

Implementation ML_Lab 6 LinearRegression_GradientDescent.ipynb

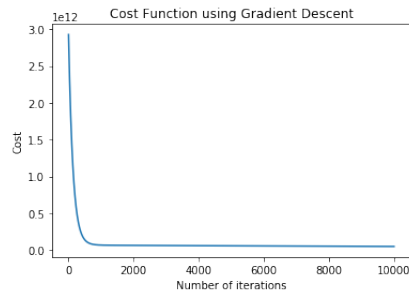
Steps .

- Understand the problem.
- Import required Python libraries.
- Import the dataset and convert to as dataframe.
- Preprocess the data. Extract columns as X and y .
- Visualize the dataset.
- Implement gradient descent algorithm to compute the weights.
- Visualize the model and the results.
- Measure the performance of the model.

3 Results

- A line is fitted for the given dataset.





4 Observation

- The machine learning model is implemented using gradient descent algorithm.