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**CSE303: Tasks on Lab 07**

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| Student ID | 2019-1-60-024 |
| Student Name | Adri Saha |
| Course Name | Statistics for Data Science |
| Course Code | CSE303 |
| Section | 01 |

Submitted to:

Dr. Mohammad Rezwanul Huq

Associate Professor,

Department of Computer Science & Engineering

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**Topic: Linear Algebra and Regression**

**Outputs of given tasks**

1. Write a Python script that can compute the inverse of a 3\*3 square matrix without Using Library function.

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Output for inverse of a 3\*3 square matrix without using built-in functions

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Output for inverse of a 3\*3 square matrix when determinant is 0

1. Write a Python script that implements your Linear Regression Model for a simple linear

regression problem. You must not use any library functions to do that. You must show the plots as you have done in the example mentioned above. Use SimpleLinearRegression csv file.

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Figure: Plot for Simple linear regression

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Output for simple linear regression model without using built in function

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Figure: Linear regression for training set

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Figure: Linear regression for testing set

1. Write a Python script that implements your Linear Regression Model for a multivariate

linear regression problem. Use concepts of Linear Algebra to accomplish that. You must use

your own built functions and modules and must not use any library functions for inverse or other

purposes. You must show appropriate plotting. Use RealEstate csv file.

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Figure: Plot for multivariate linear regression in 3d projection

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Figure: Output for multivariate linear regression without using built in function