**Data Science for Engineers**

**Lab Report 10**

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**19l-1316**

**Section-7A**

Linear and Logistic Regression

**INTRODUCTION:**

Linear regression is utilized for regression tasks, while logistic regression helps accomplish classification tasks. Supervised machine learning is a widely used machine learning technique that predicts future outcomes or events. It uses labeled datasets to learn and generate accurate predictions.

**OBJECTIVES:**

• To get familiarized with linear and logistic regression

**Application:**

Linear regression has many practical uses. Most applications fall into one of the following two broad categories: If the goal is prediction, forecasting, or error reduction, linear regression can be used to fit a predictive model to an observed data set of values of the response and explanatory variables. Logistic regression is an example of supervised learning. It is used to calculate or predict the probability of a binary (yes/no) event occurring. An example of logistic regression could be applying machine learning to determine if a person is likely to be infected with COVID-19 or not.

**Issues:**

we never find any issue regarding this lab.

**Conclusion:**

In this lab we understand simple linear regression means that we can predict a dependent variable from an independent one, so whenever we need to know from the beginning each time we add information. In linear regression, the outcome is continuous and can be any possible value. However, in the case of logistic regression, the predicted outcome is discrete and restricted to a limited number of values. For example, say we are trying to apply machine learning to the sale of a house.