Practical No: 01

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Aim: To implement a Machine Learning Regression model using a Simple Linear regression algorithm

Machine Learning(ML): Machine Learning is the field of study that gives computers the capability to learn without being explicitly programmed. ML is one of the most exciting technologies that one would have ever come across. As it is evident from the name, it gives the computer that makes it more similar to humans: The ability to learn. Machine learning is actively being used today, perhaps in many more places than one would expect.

ML Model: Machine learning models are computer programs that are used to recognize patterns in data or make predictions.Machine learning models are created from machine learning algorithms, which are trained using either labeled, unlabeled, or mixed data. Different machine learning algorithms are suited to different goals, such as classification or prediction modeling, so data scientists use different algorithms as the basis for different models. As data is introduced to a specific algorithm, it is modified to better manage a specific task and becomes a machine learning model.

Simple Linear Regression: Simple linear regression is a statistical approach for representing the connection between two variables using a straight line equation. A dependent variable (Y) based on an independent
variable (X).
Y = aX + b
symbolizes this linear correlation, with 'a' denoting the line's slope and 'b' representing its y-intercept

Conclusion: We successfully understood the use of Simple linear regression which enabled predictions and insights within its linear assumptions.