Assignment 3

Foundations of Machine Learning (**CS564**)

Date:- 13-11-2023 **Deadline:-20-11-2023**

Instructions:

1. **Coding must be done using Python, and available libraries such as numpy, pandas and scikit learn**

can be used.

2. All assignments should be completed and uploaded before the deadline.
3. Markings will be based on the correctness and soundness of the output. Marks will be deducted in case of plagiarism.
4. Proper indentation and appropriate comments are mandatory.
5. You should zip all the required files and name the zip file as ***roll_no*.zip**, eg. **1501cs11.zip. 6.** Upload your assignment (**the zip file**) in the following link:

https://docs.google.com/forms/d/e/1FAIpQLScH6m7WwTUoWpgmel33wJtrNZoXNv_02yLDvxdhrLLPHetOLw/viewform?usp=sf_link

1. Design a predictive regression model that forecasts sales based on the "Advertising.csv" dataset. Afterwards, employ logistic regression and Support Vector Machines (SVM) to predict defaulters using the "Credit.csv" and "Credit-Modified.csv" datasets. Perform a 70-30 train-test split for model evaluation and measurement of performance. Create a scatter plot with a clear separation line to visualise the data distribution. Generate a table that assesses the significance of the dataset features using the Anova test and test the significance of the derived model parameters.
2. Please provide precise documentation (pdf **format only**) of your assignment.