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**Class: First Year**

**Course: Machine Learning Course**

**ASSIGNMENT 3**

**1. Take 50 startups of any two countries and find out which country is going to provide best profit in future**.

**A.** Decision Tree Regression is performed to predict the profits of the startups of New York and California. The outputs are as follows:





From outputs it is shown that the profit New York is greater than Florida:



**2. Annual temperature between two industries is given. Predict the temperature in 2016 and 2017 using the past data of both country.**

**A**. Polynomial regression is applied as follows:









The predictions for the years 2016 and 2017 are as follows :



**3. Data of global production of CO2 of a place is given between 1970s to 2010. Predict the CO2 production for the years 2011, 2012 and 2013 using the old data set.**

**A.** Using Polynomial Regression,the given dataset is presented as follows:







Following are the predictions for the production of CO2 in the years 2011, 2012 and 2013:



**4. Housing price according to the ID is assigned to every-house. Perform future analysis where when ID is inserted the housing price is displayed.**

**A.** By performing Polynomial Regression on the datsaset, the following inputs are obtained from which it is seen that polynomial regression is giving us accurate results than linear regression:





When user enters House ID, the price is printed as shown:



By comparing results of both regressions, it is seen that poly. regression is providing accurate results as compared to linear regression.

**5. Data of monthly experience and income distribution of different employs is given. Perform regression.**

**A**. Polynomial Regression is implemented in this case.







Polynomial regression of 6th degree is implemented the following results are obtained:

