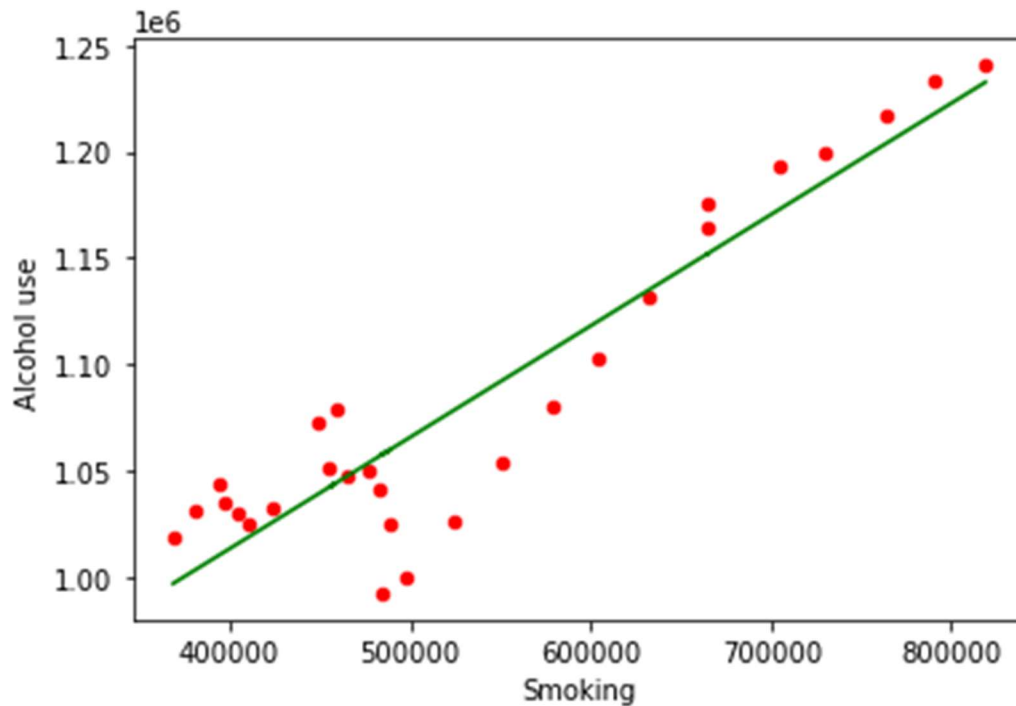


Regression Analysis Reports

By Bhavya Yaraswini Gadu

1. Relation between air pollution and outdoor air pollution in India

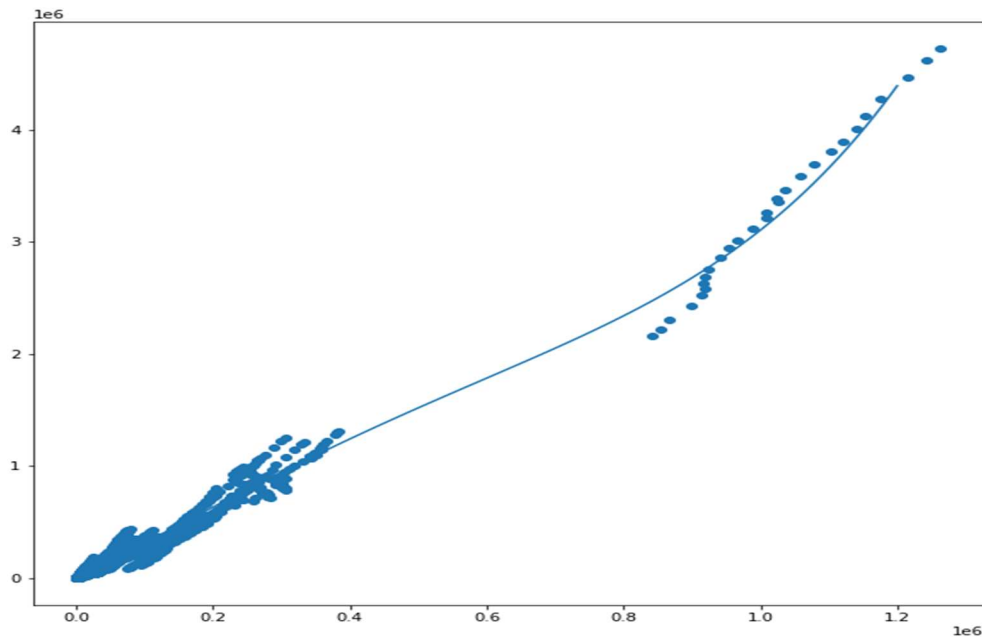


Regression coefficient= 0.5231291380349647

Analysis-

From the regression coefficient which is 0.52, it can be observed that the two features air pollution and outdoor air pollution in India are not very much correlated. Even though the outdoor air pollution is one of the cause of air pollution in India but it is not the only reason for the pollution.

2. Predicting the relation between physical activity and body mass index using Polynomial regression



R2 score is 0.9873629367367641

Analysis-

From the r2 score which is 0.98, it is clearly understood that the physical activity and body mass index are highly correlated. Clear awareness on physical activities helps the population to have balanced body mass index. From the prediction it is observed that for 1000 units decrease in awareness towards physical fitness or lack of physical fitness leads to 5000 units increase in high body mass index.

3. Comparing the handwashing facility in India and Pakistan using Multinomial Regression

India ----- [0.53941374 0.12691466]

Pakistan -- [0.14601608 0.38339417]

Analysis-

From the regression coefficient it is clearly evident that India's water sources are contributing much to the country's handwashing facility than in Pakistan i.e., one-unit downfall in the water source purity leads to 0.53 units decrease in access to handwash. In Pakistan, the sanitation is contributing much to the handwashing facility than in India i.e., one-unit downfall in the sanitation facility leads to 0.38 units decrease in access to handwash.

The comparisons within the countries provides the clear insight that in India the water sources effect on handwashing facility is much more than the effect of sanitation on handwashing facility. On the other hand, in Pakistan, the handwashing facility is degrading due to unhygienic sanitation.

Finally, it can be inferred that in order to increase the handwashing facility, the water sources need to be improved in India and sanitation need to be improved in Pakistan.