

### Project Report -3 Adult Census Data



1. **Discuss the losses of all the regression models implemented with the help of the comparison graph.**

A ) For the Lasso Regression the model performs moderately well . However in sometimes it underperform because it entirely eliminate some feature on the complex relationship .

B) For the Ridge Regression is to prevent overfitting . It is the highest MSE among three models . It struggle between the non linear relationship where our dataset has many non linear relationship that why it has highest error.

C) In the XGBoost model it catches all the complex pattern that Lasso and Ridge misses. Among three it is the lowest MSE and perform better with complex pattern .

## **2. Which model do you think performed well and why?**

- From the graph we can clearly say that XGBoost performs well with the lowest MSE , shows that it capture the underlying patterns in the data .
- It has ability to learn from the error iteratively . The minimum bias and variance make it more efficient to the model .