

# Regression-2

## Assignment Questions



**Q1. Explain the concept of R-squared in linear regression models. How is it calculated, and what does it represent?**

**Q2. Define adjusted R-squared and explain how it differs from the regular R-squared.**

**Q3. When is it more appropriate to use adjusted R-squared?**

**Q4. What are RMSE, MSE, and MAE in the context of regression analysis? How are these metrics calculated, and what do they represent?**

**Q5. Discuss the advantages and disadvantages of using RMSE, MSE, and MAE as evaluation metrics in regression analysis.**

**Q6. Explain the concept of Lasso regularization. How does it differ from Ridge regularization, and when is it more appropriate to use?**

**Q7. How do regularized linear models help to prevent overfitting in machine learning? Provide an example to illustrate.**

**Q8. Discuss the limitations of regularized linear models and explain why they may not always be the best choice for regression analysis.**

**Q9. You are comparing the performance of two regression models using different evaluation metrics. Model A has an RMSE of 10, while Model B has an MAE of 8. Which model would you choose as the better performer, and why? Are there any limitations to your choice of metric?**

**Q10. You are comparing the performance of two regularized linear models using different types of regularization. Model A uses Ridge regularization with a regularization parameter of 0.1, while Model B uses Lasso regularization with a regularization parameter of 0.5. Which model would you choose as the better performer, and why? Are there any trade-offs or limitations to your choice of regularization method?**

**Note:** Create your assignment in Jupyter notebook and upload it to GitHub & share that github repository link through your dashboard. Make sure the repository is public.