

Multivariate Data Analysis Assignment 3

Multiple linear regression & logistic regression

1 **Perform** multiple regression analysis using **MASS** package **birthwt** data.

- 1.1 Proceed with preprocessing for categorical variables
- 1.2 Identify (multiply) multicollinearity through the way you use it
- 1.3 Determine if the data follows normal distribution (visualization progress)
- 1.4 Fit the model (place bwt, birth weight, y)
Describe
- 1.5 Plot the actual y-value (y-axis) and the forecast y-value (x-axis).
- 1.6 Calculate RMSE, MAE, and MAPE of fitting model.

2 Perform logistic regression using **Titanic's built-in data** .

- 2.1 Find the optimal variable using the variable selection method.
- 2.2 Logistic regression using the above variables The ACC
Accuracy) Search for the optimum cutoff (0.1 to 0.9) 0.1
At intervals).

2.3 The TPR, precision, TNR, ACC,
Get BCR, F1.