

For my project, I will conduct a regression analysis to investigate the relationship between selected football statistics and the outcomes (wins and losses) of the 2022 Kansas City Chiefs' games. I will employ regression techniques, including both linear regression and logistic regression, depending on the nature of the response variable, to predict game outcomes based on variables such as rushing yards, passing yards, fumbles, interceptions, and others. To assess the model's performance and prevent overfitting, I will implement k-fold cross-validation, a robust technique that partitions the dataset into subsets for training and validation multiple times. Furthermore, I will ensure the reliability of the model by dividing the dataset into a training set and a testing set, allowing me to evaluate its performance on unseen data. These steps will provide a thorough analysis of the football statistics that are most correlated with winning and losing for the 2022 Kansas City Chiefs, enhancing the project's validity and practical implications.