

## **ASSIGNMENT #5**

1. Question: You are tasked with developing a predictive model for patient outcomes in a healthcare setting. Explain the importance of K-fold cross-validation in evaluating the performance of your model. Demonstrate how you would implement K-fold cross-validation and interpret the results.

Objective: Apply K-fold cross-validation to ensure robust model evaluation.

2. Compare the performance of a basic decision tree model with an XGBoost model in predicting employee attrition in a company. Explain the steps involved in training the XGBoost model and how it improves over a single decision tree. Evaluate the models using appropriate performance metrics.

Objective: Demonstrate the superiority of advanced boosting techniques like XGBoost over simple models.