5. Key Performance Indicators (KPIs)

Measuring success is critical for evaluating the project's impact. The following KPIs will be tracked:

Data Quality and Processing KPIs

• Data Completeness Rate: Percentage of missing values handled effectively.

• Feature Engineering Success: Number of key features identified and utilized.

Model Performance KPIs

• Predictive Accuracy: Measured through metrics like Precision, Recall, F1-score, and AUC-ROC.

• False Positive/Negative Rates: Assessment of misclassification impact.

• Model Generalization:Performance on unseen test data and cross-validation results. Deployment and Operational KPIs

• API Response Time: Time taken for real-time predictions.

• System Uptime: Ensuring at least 99% uptime for model accessibility.

• Scalability: Ability to handle increasing amounts of data and requests.

Business Impact KPIs

• Reduction in Misdiagnosis Rates: Measured by comparing model-assisted diagnoses with actual patient outcomes.

• Improved Healthcare Decision-Making: Feedback from healthcare professionals using the model.

• Operational Efficiency Gains: Reduction in resource wastage due to predictive analytics.