# Methodologies

* **AdaBoost (Adaptive Boosting):** Combines weak learners to form a strong classifier, Focuses on misclassified instances iteratively reduces overfitting and improves pattern detection.
* **XGBoost (Extreme Gradient Boosting):** Efficient on large datasets with high predictive power Handles diverse data types and tunes parameters, Enhances accuracy and model robustness.
* **Stacking Classifier:** Ensemble of different model meta-classifier learns from outputs of base models, Achieves superior accuracy through combined strengths.
* **Logistic Regression:** Effective for binary classification models probability of cancer presence Simple yet powerful for real-time predictions