**Healthcare Prediction**

**Methodology**

We have used the following algorithms to train our model:

1. Logistic Regression: It is a statistical model used to predict a binary outcome (yes/no, 0/1, true/false, etc.) based on one or more input variables. It calculates the probability of an event occurring and classifies the observation into one of two classes based on a threshold value.
2. Decision Tree: It is a tree-like model where each internal node represents a feature or attribute, each branch represents a decision or rule, and each leaf node represents a class label. It is used for both classification and regression problems.
3. Random Forest: It is an ensemble learning method that creates a large number of decision trees, each using a random subset of the features and observations. The final prediction is made by taking the majority vote of all the trees.
4. KNN (K-Nearest Neighbors): It is a lazy learning algorithm that uses a distance metric to find the K nearest neighbors to a given data point and then predicts the class based on the majority class of the neighbors.
5. SVM (Support Vector Machine): It is a binary classification algorithm that finds the best hyperplane to separate the two classes in the feature space. It is often used in high-dimensional spaces and with non-linearly separable data.
6. Naive Bayes: It is a probabilistic algorithm that makes predictions based on Bayes' theorem. It assumes that the presence or absence of a particular feature is independent of the presence or absence of any other feature.
7. Gradient Boosting: It is a boosting ensemble method that combines weak learners (usually decision trees) in a stepwise manner to improve the overall prediction accuracy. It builds the model by iteratively adding new weak learners that minimize the error of the previous learners.