**Unit Testing Report: Lung Cancer Prediction using Random Forest and Naïve Bayes’**

**Introduction:**

This report summarizes the unit testing conducted on a machine learning model for predicting a specific outcome (e.g., disease risk, patient classification). The test focused on evaluating whether the model's predictions from two algorithms, Naive Bayes and Random Forest, produce different outputs for specific test cases.

**Test Data:**

* A small dataset(size is 50) containing relevant features (columns) was used for testing.

**Features:**

* The features used in the model are listed:
  + Air Pollution
  + Alcohol use
  + Dust Allergy
  + And all attributes

**Testing Methodology:**

* The unit test function (unitTest) connects to a MongoDB database named "Testing" and inserts a document into the "unitTesting" collection.
* The document contains the following information:
  + Input values for the model (inputValues)
  + Predicted value from Naive Bayes (valueFromNaiveBayes)
  + Predicted value from Random Forest (valueFromNaiveRandomForest)

**Results:**

* The test verifies that the models generate different predictions for specific test cases giving similarity of both algo upto 55%.

**Discussion:**

* This unit test demonstrates the basic functionality of the models and ensures they can produce different outputs.
* Further testing is required to evaluate the overall performance of both models using relevant metrics (accuracy, precision, recall, etc.) applied to a larger unseen dataset.

**Next Steps:**

* Perform comprehensive model testing on a larger dataset.
* Analyze the performance of each model using appropriate metrics.
* Compare the performance of both models to determine the most suitable one for your specific task.

**Limitations:**

* This unit test only focuses on verifying different predictions and doesn't evaluate model accuracy.

**Conclusion:**

* The unit test successfully validates the ability of the models to produce varying results for designated test cases.
* Additional testing is crucial to assess the models' effectiveness in real-world scenarios.

**Please note:**

* This is a brief report based on the information provided. You may need to modify it to include specific details about your model and testing procedures.
* Fill in the missing feature names from your columns list.