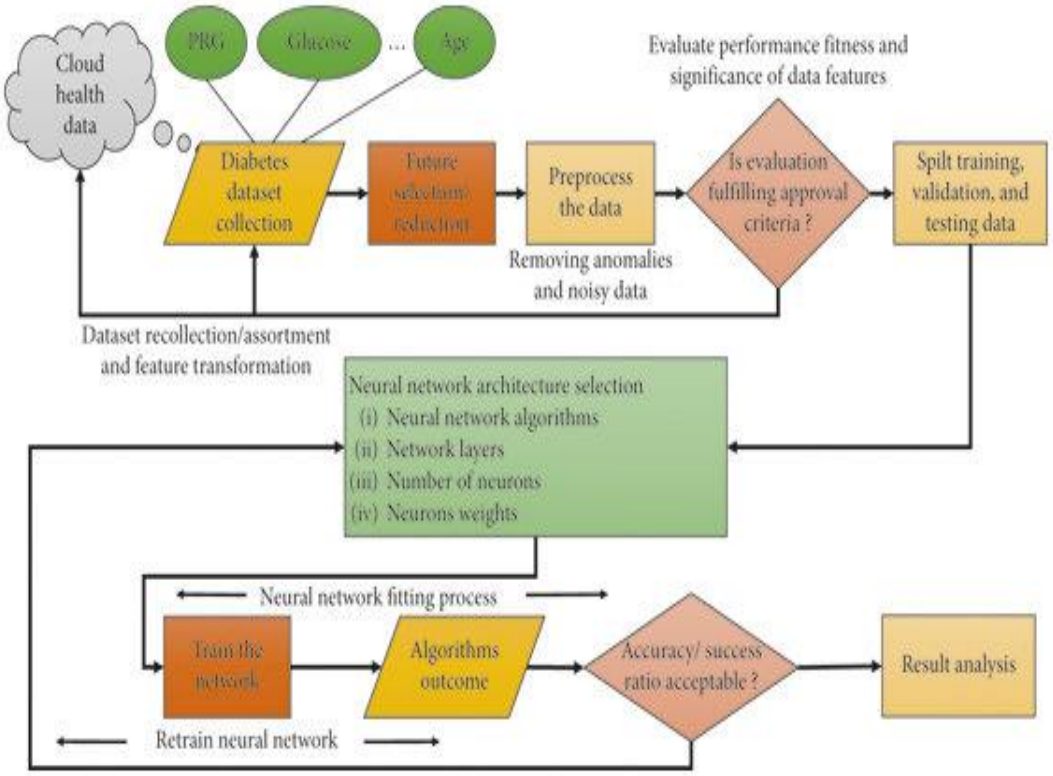
IDEATION PHASE PROBLEM STATEMENT

Date	30 September 2023
Team ID	344
Project Name	Diabetes Prediction : Diabetes Prediction Using Different Machine Learning Approaches

PROBLEM STATEMENT

Diabetes is a most common disease caused by a group of metabolic disorders. It is also known as Diabetic mellitus. It affects the organs of the human body. It can be controlled by predicting this disease earlier. If diabetics patient is untreated for a long time, it may lead to increase blood sugar. Now a days, Healthcare industries generating large volume of data. Machine Learning algorithms and statistics are used to predict the disease with the help of current and past data. Machine learning techniques helps the doctors to predict early stage for diabetics. Diabetics patient medical record and different types of algorithms are added in dataset for experimental analysis. we use logistic regression, random forest, decision tree classifier and gradient boosting to predict whether a patient has diabetes based on diagnostic measurements. Performance and accuracy of the applied algorithms is discussed and compared.


Cloud health data
PRG
Glucose
...
Age
Diabetes dataset collection
Future selection reduction
Preprocess the data
Evaluate performance fitness and significance of data features
Is evaluation fulfilling approval criteria ?
Spilt training, validation, and testing data
Removing anomalies and noisy data
Dataset recollection/assortment and feature transformation
Neural network architecture selection
(i) Neural network algorithms
(ii) Network layers
(iii) Number of neurons
(iv) Neurons weights
Neural network fitting process
Train the network
Algorithms outcome
Accuracy/ success ratio acceptable ?
Result analysis
Retrain neural network

IDEATION PHASE BRAINSTORMING

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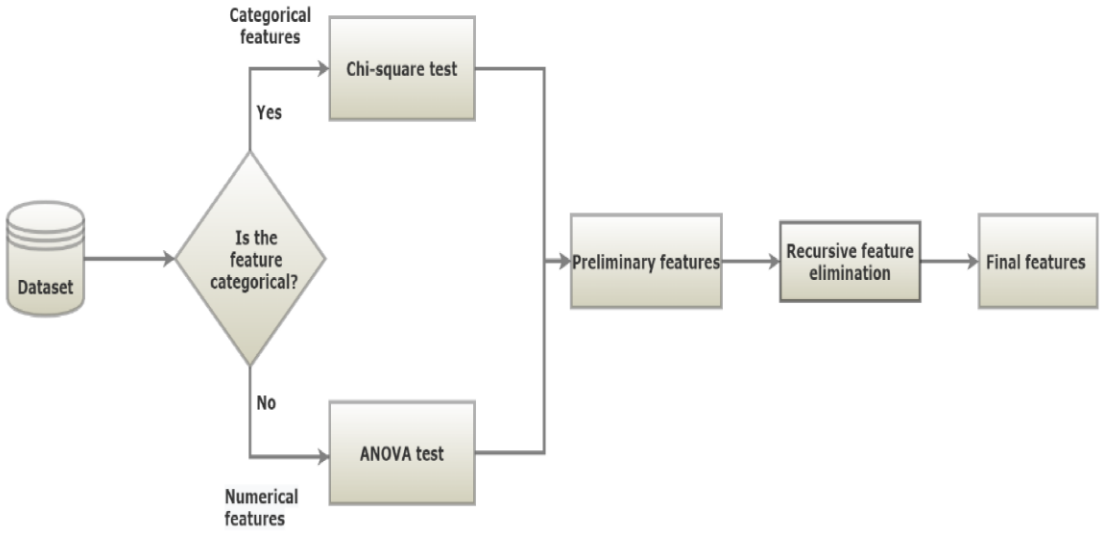
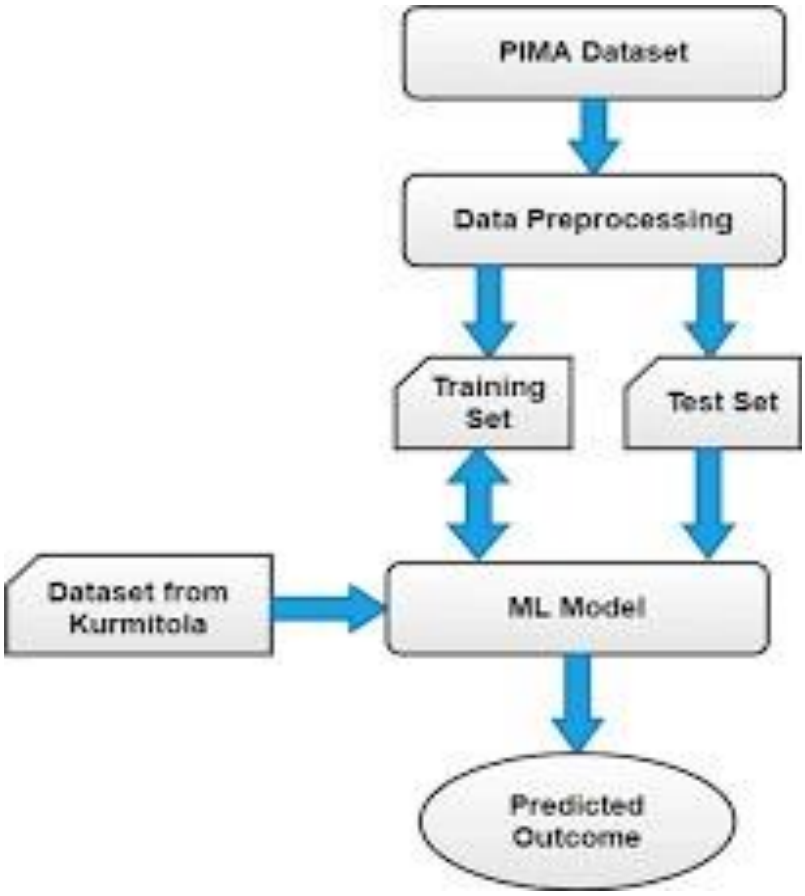
In the Ideation stage, the aim is to generate a large number of ideas ideas that potentially inspire newer, better ideas. which the team can then filter and narrow down into the best, most practical, or most innovative ones. There are many great methods that can help the design team during the Ideation sessions.

Problems



PRIORITIZING IDEAS



IDEATION PHASE EMPATHIZE AND DISCOVER

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