

Project Design Phase-II Technology Stack(Architecture & Stack)

Date	16 October 2022
Team ID	PNT2022TMID02667
Project Name	Project - Visualizing and Predicting Heart Diseases with an Interactive Dash Board
Maximum Marks	4 Marks

ARCHITECTURE:

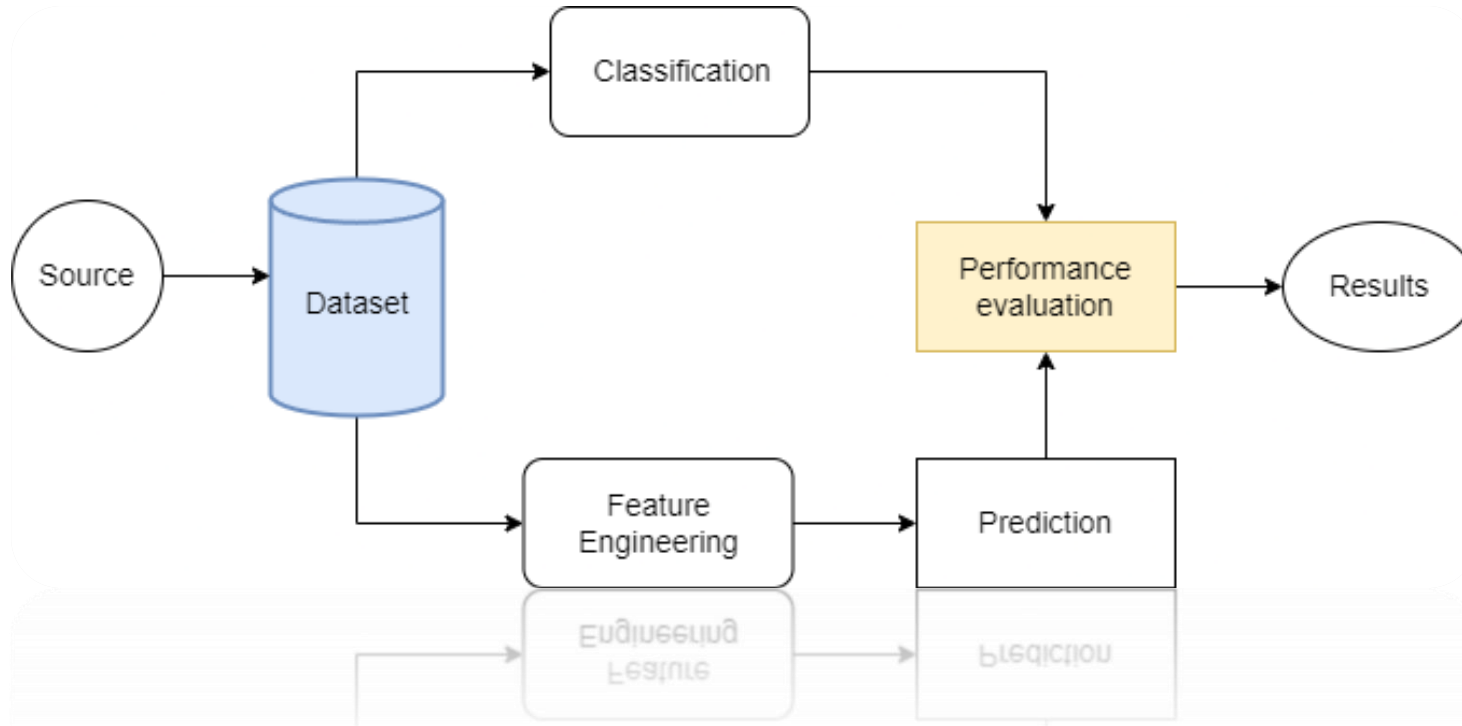


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Importing data	You can transfer data from outside sources and integrate it with data you acquire using Analytics using Data Import.	Python, numpy, pandas.
2.	Data Cleaning	Data cleaning is the process of organising and fixing erroneous, improperly structured, or otherwise disorganised data.	Python, numpy, pandas
3.	Data Preprocessing	Any type of processing done on raw data to get it ready for another data processing operation is referred to as data preprocessing, a part of data preparation.	Python, numpy, scipy, pandas
4.	Training data	The portion of the original data used to train the machine learning model is known as training data.	Numpy, scipy, pandas
5.	Testing data	Data that has been specially designated for use in testing, usually of a computer programme, is known as test data.	Numpy, scipy, pandas
6.	Machine learning model	A file that has been trained to recognise particular patterns is known as a machine learning model. A model is trained over a set of data while being given an algorithm to utilise for reasoning about and learning from the data.	Numpy, scipy, pandas, sklearn
7.	Improve model performance	One metric for measuring classification model performance is accuracy. Informally, accuracy is the percentage of predictions that our model correctly predicted.	sklearn
8.	Checking accuracy	Before using data, a series of quality validations is conducted as part of a data accuracy check, also known as a data sanity check.	Sklearn

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Collection of data	Accurate data must be gathered, measured, and examined from a range of pertinent sources in order to solve issues, provide answers, assess results, and predict trends and probability.	Python,numpy,pandas
2.	EDA Analysis	Data analysis utilising visual methods is called exploratory data analysis (EDA). With the use of statistical summaries and graphical representations, it is used to identify trends, patterns, or to verify presumptions.	Python, EDA tools
3.	Train & Test split of data	Machine learning algorithms that are appropriate for prediction-based algorithms and applications are evaluated using the train-test split. We may compare the output of our own machine learning model to that of other machines using this quick and simple process.	Basic imports of python such as scipy, numpy, pandas
4.	Model prediction	A popular statistical method for forecasting behaviour is predictive modelling.	Sklearn import package