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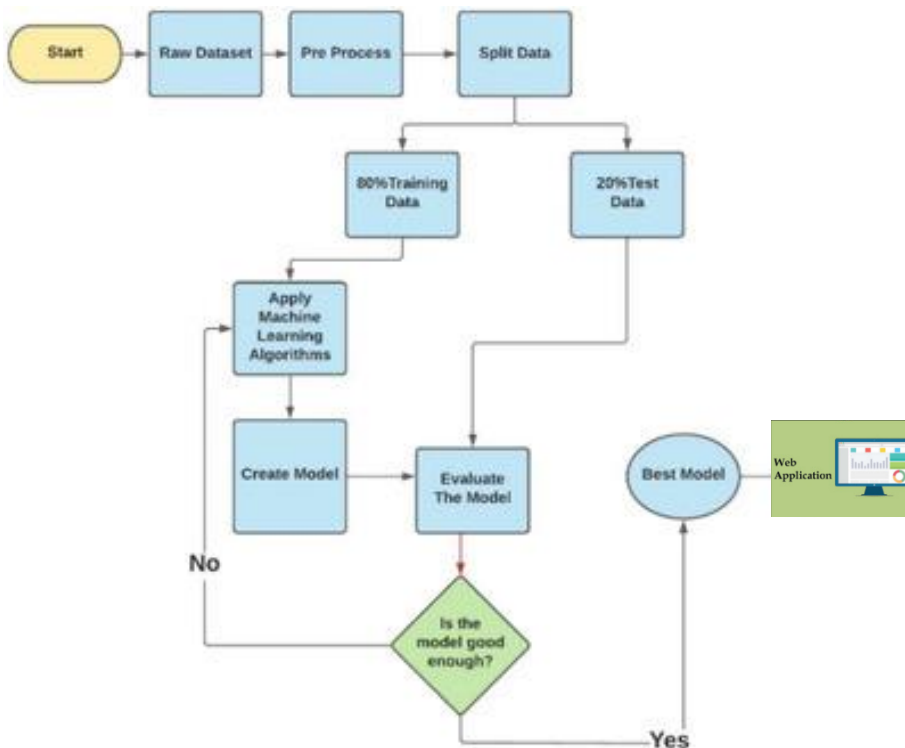# Technology Stack (Architecture & Stack)

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Diabetics using machine learning

Guidelines:

1. Include all the processes (As an application logic)
2. Provide infrastructural demarcation (Local)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User checks his test results according to the columns in the Application	Python , Flask
2.	Application Logic-1	Logic-1 tested for a process in the application	Python
3.	Application Logic-2	Logic-2 tested for a process in the application	Decision trees, Logistic regression
4.	Application Logic-3	Logic-3 tested for a process in the application	Random forest classification
5.	Database	diabetic patients information	Kaggle
6.	Cloud Database	Database of diabetic patients on Cloud	Github
7.	File Storage	File storage requirements	Github
8.	External API-1	External API used in the application	Flask
9.	External API-2	External API used in the application	Python
10.	Machine Learning Model	Machine Learning Model	Decision Trees
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / CloudLocal Server Configuration	Deployed using Flask(Local)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	NumPy,Pandas,Flask
2.	Scalable Architecture	Justify the scalability of architecture (3 – tier,Micro-services)	Technology used 2-Tire
3.	Availability	Justify the availability of application	Technology used is Flask for interacting with users to give their data to the machine learning model

References:

https://www.javatpoint.com/diabetes-prediction-using-machine-learning

https://aws.amazon.com/architecture

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https://www.researchgate.net/publication/350985064_Diabetes_Prediction_Using_Machine_Learning

https://pubs.aip.org/aip/acp/article-abstract/2523/1/020160/2875042/Detecting-diabetes-using-machine-learning?redirectedFrom=fulltext