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

Date	*19 October 2022*
Team ID	*PNT2022TMID09701*
Project Name	***NATURALDI SASTERSI NTENSI TYANALYSI SANDCLASSI FI CATI ONUSINGARTI FI CI ALI NTELLI GENCE***

TechnicalArchitecture:

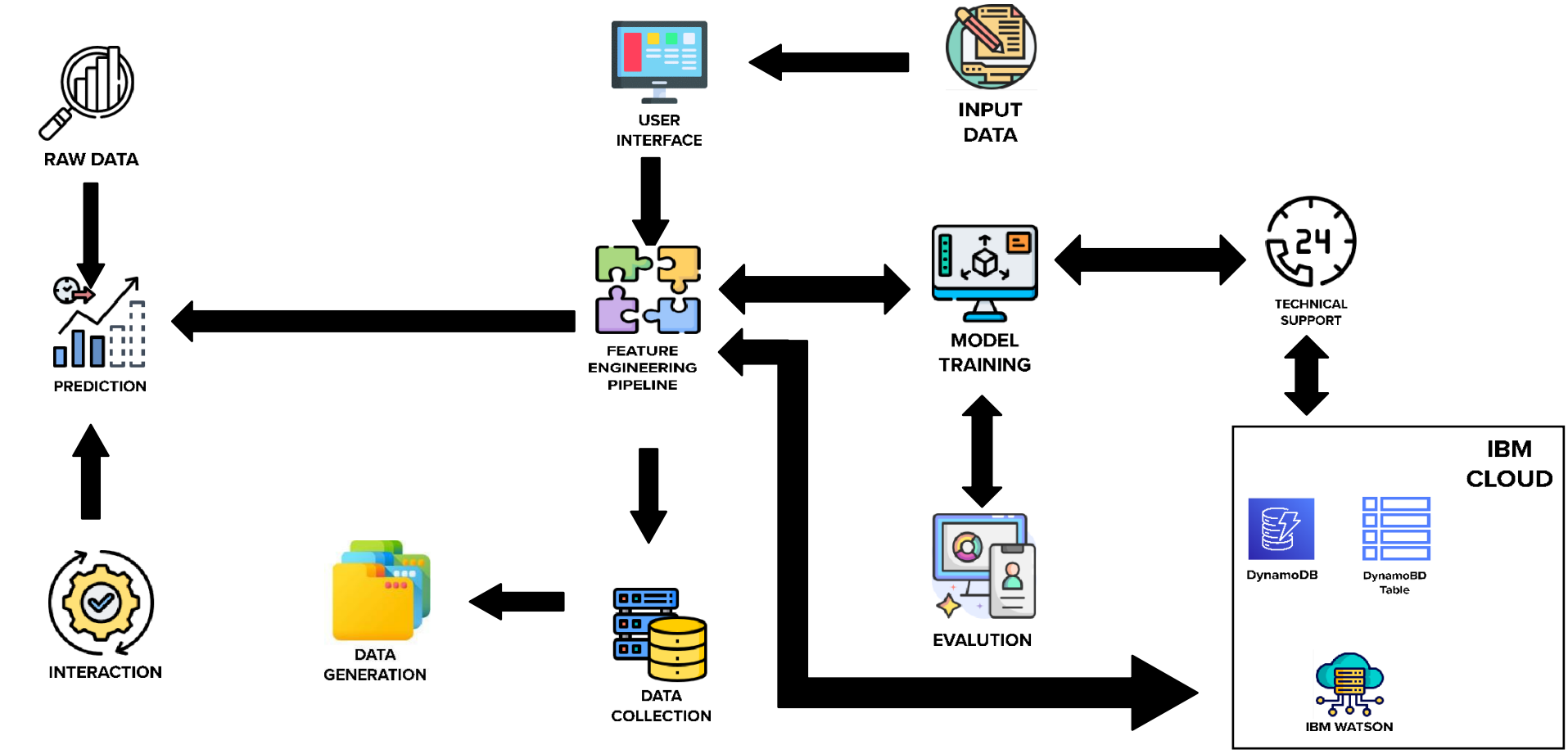

***Table-1*: Components &Technologies:**

S.No	Component	Description	Technology
1.	User Interface	User interacts with application for the prediction of Any Natural disaster which will happen infuture minutes.	HTML,CSS,JavaScript,Django,Python.
2.	Feature Engineering Pipeline	Algorithm scan' t make sense of raw data. We have to select, transform, combine, and otherwise prepare our dataso thealgorithm can find usefulpatterns.	Imageprocessing, pattern extraction,etc.
3.	ModelTrainingkit	It learnspatternsfrom thedata. Then they use thesepatternsto perform particulartasks.	MulticlassClassification Model,RegressionModel,etc.
4.	Predictionunit	Thisfunction isused to predict outcomesfrom thenewtrained data to perform new tasksand solvenew problems.	Decision trees, Regression, Neuralnetworks.
5.	Evaluationsystem	It monitorsthat how Algorithm performson data aswellasduringtraining.	Chi-Square,ConfusionMatrix,etc.
6.	Interactiveservices	Tointeractwithourmodeland giveitproblemsto solve. Usually thistakestheform of an API, auserinterface,or acommand-lineinterface.	Applicationprogramminginterface,etc.
7.	Datacollection unit	Dataisonlyusefulif it' saccessible,soit needstobestored ideally in a consistent structureandconveniently in oneplace.	IBMCloud,SQLServer.
8.	Datagenerationsystem	Every machinelearning application livesoff data.Thatdatahastocomefrom somewhere. Usually, it' sgenerated by oneof your core businessfunctions.	Syntheticdatageneration.
9.	Databasemanagementsystem	Anorganizedcollectionof datastoredindatabase,sothatitcanbeeasilyaccessed andmanaged.	MySQL, DynamoDBetc.
10.	IBMCloudservices	Processed data stored in cloud servicewhich	IBMCloudetc.

		canbeaccessbytheadminanywhereovertheinternet.	

Table-2:ApplicationCharacteristics:

S.No	Characteristics	Description	Technology
1.	Open-SourceFrameworks	An open sourceframework isa templateforsoftware development that isdesigned by a socialnetwork of softwaredevelopers. Theseframeworksarefreeforpublicuseand providethefoundationforbuildingasoftware application.	Keras,pensorflow.
2.	Authentication	Thiskeepsour modelssecureand makessureonly thosewhohavepermission canusethem.	EncryptionandDecryption(OTP).
3.	Applicationinterface	User usesmobileapplication and web applicationtointeractwithmodel	Android and Web Development(PhoneGap, ReactNative, andNativeScript).
4.	Availability (both OnlineandOfflinework)	I tsincludeboth onlineand offlinework. As goodinternet connection isneed for onlinework toexplorethesoftwareperfectly. Offline workincludesthesaveddatatoexploreforlatertime.	Caching,backendserver.
5.	RegularUpdates	Thetruly excellent softwareproduct needsacontinuous processof improvementsand updates.Maintain your server and makesurethat yourcontent isalwaysup-to-date. Regularly updateanappand enrich itwith new features.	• Waterfall Approach • IncrementalApproach • SpiralApproach
6.	Personalization	Softwarehasfeatureslikeflexiblefonts,backgrounds,settings, colour themes, etc. whichmakea software interfacelooksgood andfunctional.	• HubSpot • Proof