Project Design Phase-
II TechnologyStack(
Architecture&Stack)

Date	*16 NOVEBERM 2022*
TeamID	*IBM-Project-41075-1660639176*
ProjectName	***NATURALDISASTERSINTENSITYANALYSISANDCLASSIFICATIONUSINGARTIFICIALINTELLIGENCE***

TechnicalArchitecture:

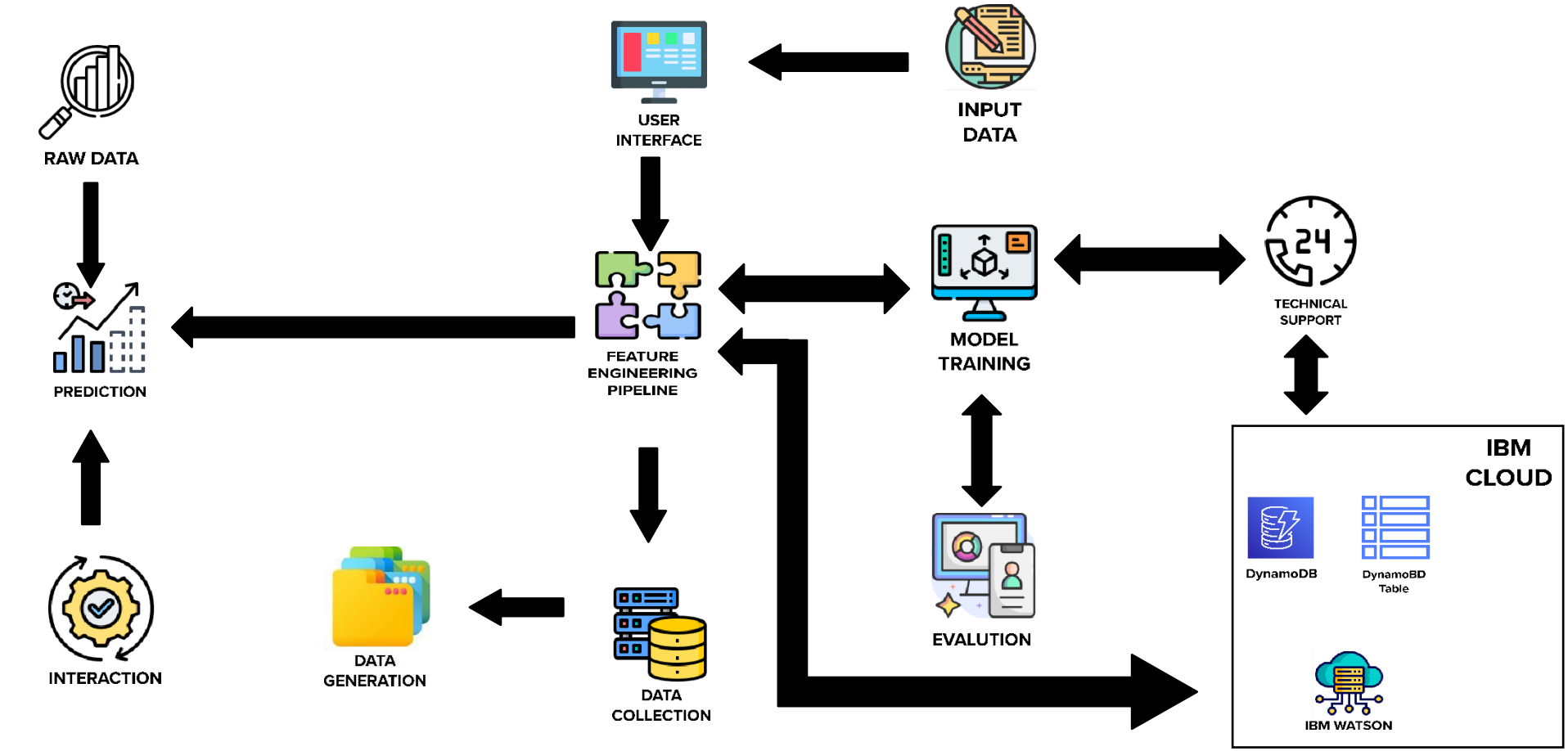

***Table-1*:Components&Technologies:**

S.No	Component	Description	Technology
1.	UserInterface	Userinteractswithapplicationforthepredictionof Any Natural disaster which will happen infutureminutes.	HTML,CSS,JavaScript,Django,Python.
2.	FeatureEngineeringPipeline	Algorithmscan' t makesenseof rawdata. Wehaveto select, transform, combine, and otherwiseprepareour datasothealgorithm can find usefulpatterns.	Imageprocessing, pattern extraction,etc.
3.	ModelTrainingkit	It learnspatternsfromthedata. 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.	Applicationprograminginterface,etc.
7.	Datacollection unit	Dataisonlyusefulif it' saccessible,soit needstobestorediideally 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*