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

Date	03 October 2022
Team ID	PNT2022TMID18283
Project Name	Efficient Water Quality Analysis & Prediction using Machine Learning
Maximum Marks	4 Marks

Technology Architecture:

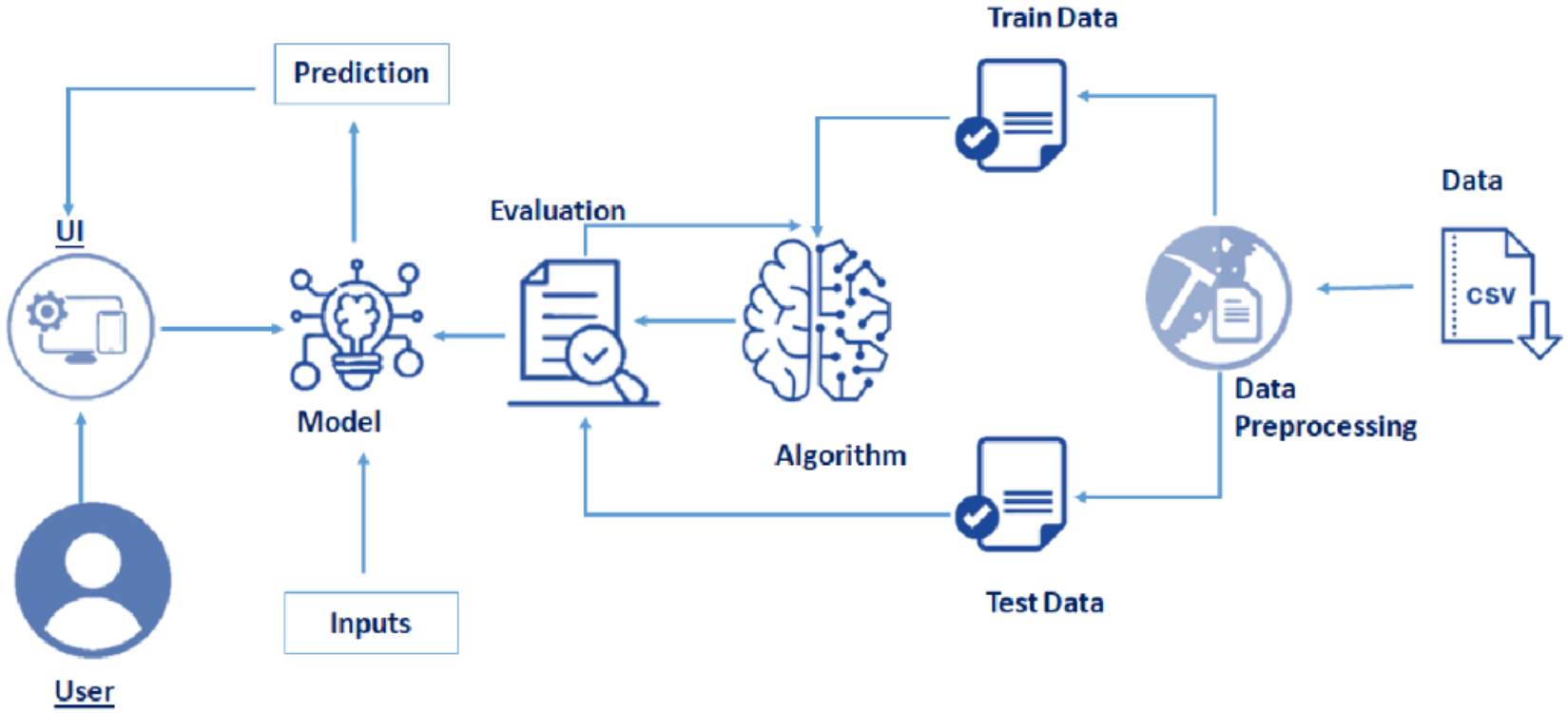

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User access to the application through the Web UI	HTML
2.	Application Logic-1	Creating an application interface	Python and Flask
3.	Application Logic-2	Machine learning models	Machine learning algorithms
4.	Application Logic-3	Flask integration	IBM Watson
5.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
6.	External API-1	Purpose of External API used in the application	IBM GeoJSON and Node-RED
7.	Machine Learning Model	Purpose of Machine Learning Model	Classification, Regression model etc
8.	Infrastructure (Cloud)	IBM Cloud App Configuration is a centralized IBM Cloud	Cloud Foundry

Table-2: Application Characteristic :

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	There is one open source frameworks used	Python
2.	Security Implementations	List all the security / access controls implemented,use of firewalls etc.	Blockchain
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	IBM Cloud
4.	Availability	Justify the availability of application (e.g. use ofload balancers, distributed servers etc.)	IBM Watson Assistant
5.	Performance	Design consideration for the performance of theapplication (number of requests per sec, use of Cache, use of CDN's) etc.	GeoJSON