

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

Date	03 October 2022
Team ID	PNT2022TMID23348
Project Name	Estimate The Crop Yield Using Data Analytics
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

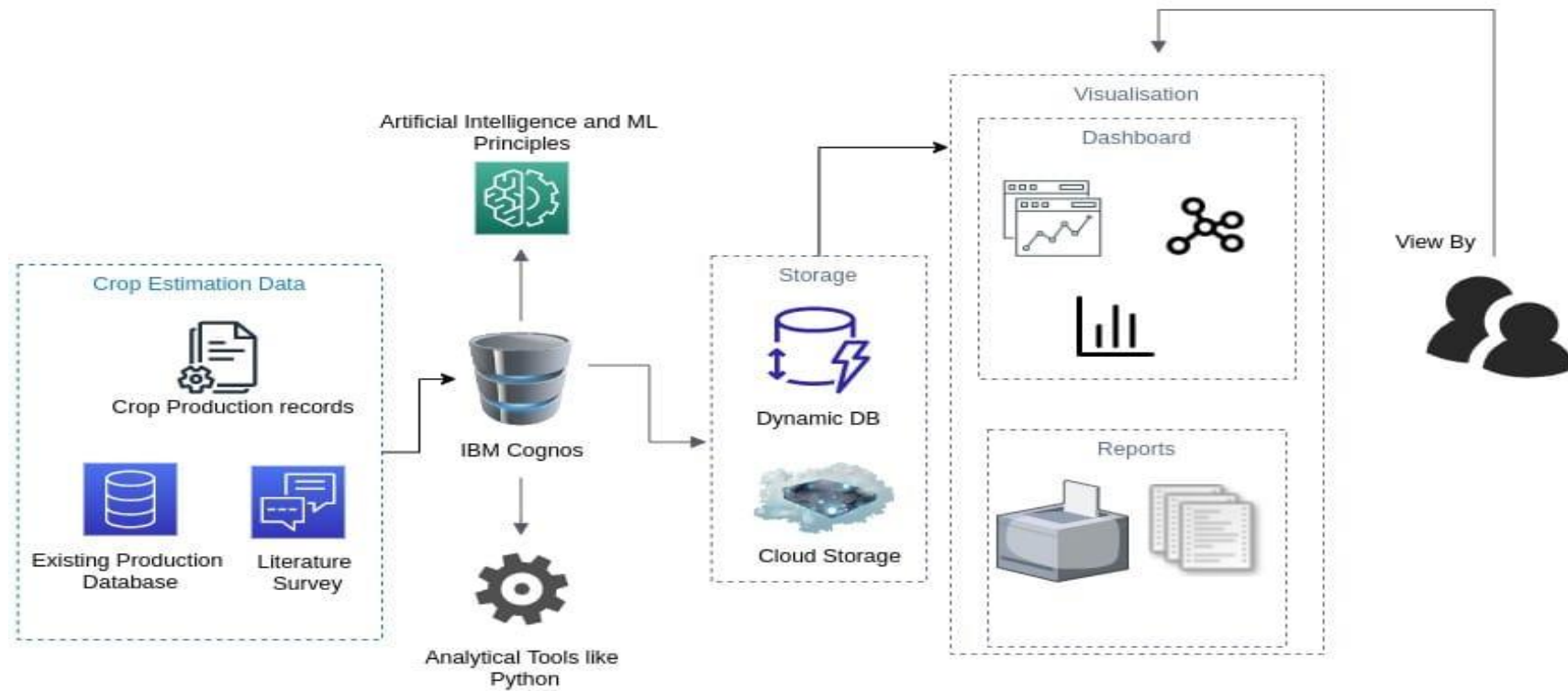


Table – I: Technology to be used and Components

S. No.	Component	Description	Technology to be used
1	Data Collection	Data is gathered from a variety of sources, especially those that specifically cater to real-world data.	Internet
2	Data Storage (Application Logic - I)	The data is obtained in the table format.	Excel/ CSV
3	Data Storage (Application Logic - II)	The data is preserved in files and folders and is displayed in the same manner to both the system that stores it and the system that retrieves it.	IBM Watson Assistant, Local File System
4	Machine Learning Model	Using just the known past of goal values, machine learning techniques are utilized to forecast target values. This is used to forecast future requirements.	Linear regression, KNN using Python
5	Analysis and Prediction	User required analysis to forecast the exploration	IBM Cognos Analytics
6	User Interface - Dashboard	A significant chance to affect user behavior and raise retention rates.	IBM Cognos Analytics

Table – II: Application Characteristics

S. No.	Characteristics	Description	Technology to be used
1	Security and Privacy	Introduce a technique to protect privacy in ML with an emphasis on minimizing runtime and communication overhead. A threat model for ML that takes into account the rise in ML-related security and privacy issues to be recognized.	IBM Cognos Analytics
2	Availability	Ensuring the data is available in the desired platform	IBM Cognos Analytics
3	Performance	The data is preserved in files and folders and is displayed in the same manner to both the system that stores it and the system that retrieves it.	IBM Cognos Analytics
4	Testability	Testing the outcome of ML systems to improve software testing strategies.	IBM Cognos Analytics
5	Reliability	Looking at the reliability of individual ML predictions, focusing on reliability estimation	IBM Cognos Analytics