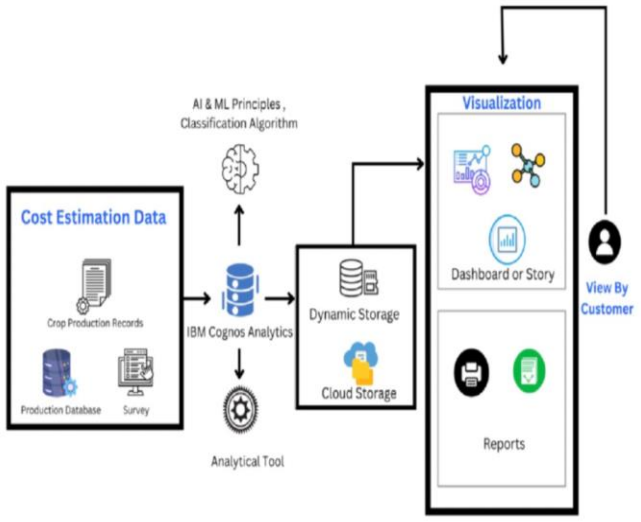
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	18 October 2022
Team ID	PNT2022TMID15871
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



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
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 Interaction- Dashboard	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Cognos and Watson
4.	Cloud Database	Database Service on Cloud	IBM cloud
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 Weather API, etc.
7.	Machine Learning Model	Purpose of Machine Learning Model	Data Analysis.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Technology of Opensource framework	Pandas, matplotlib, seaborn
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Administration control, Physical control, SHA algorithm.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Maintain Providability.
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	IBM cloud
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Easy accessability.