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

Date	14 October 2022
Team ID	PNT2022TMID15473
Project Name	Estimate The Crop Yield Using Data Analytics
Maximum Marks	4 Marks

Technical Architecture

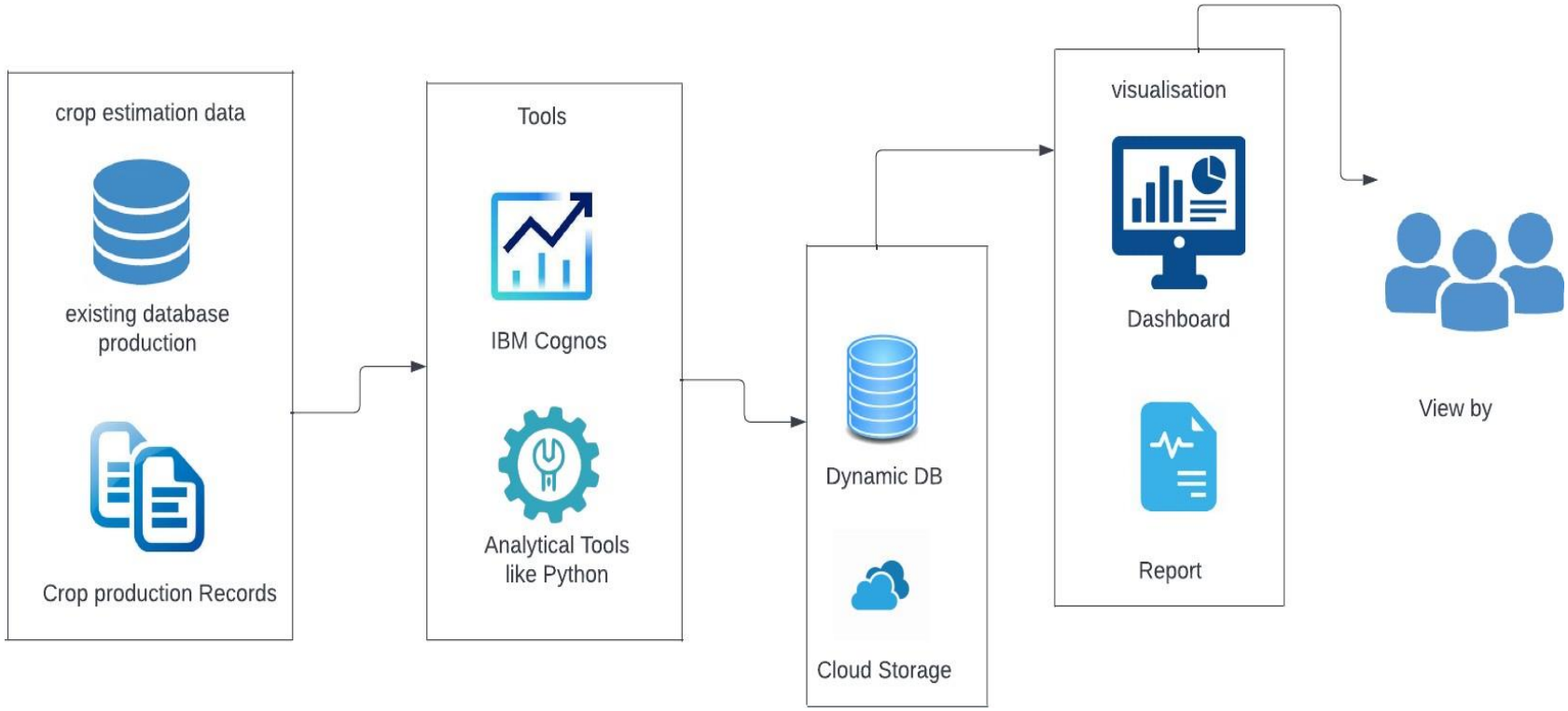

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chat bot etc.	Python, IBM Cognos
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Data for amount of a crop harvested in sample area.	IBM Watson Assistant
4.	IBM Cognos	Data Analytics	IBM Watson Service
5.	IBM Cloud	Database Service on Cloud	IBM DB2
6.	File Storage	File storage requirements	IBM Block Storage or Local File system

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It empowers the farmers and to increase the productivity	Django
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	E.g: SHA-256, Encryptions.
3.	Scalable Architecture	The estimate of crop yield is based on soil, meteorological, environmental, and crop parameters	Python - Machine learning
4.	Availability	Justify the availability of application	Technology used : Eg: Distributed servers
5.	Performance	Design consideration that will improve the usability in agricultural activities.	IBM Cognos Watson