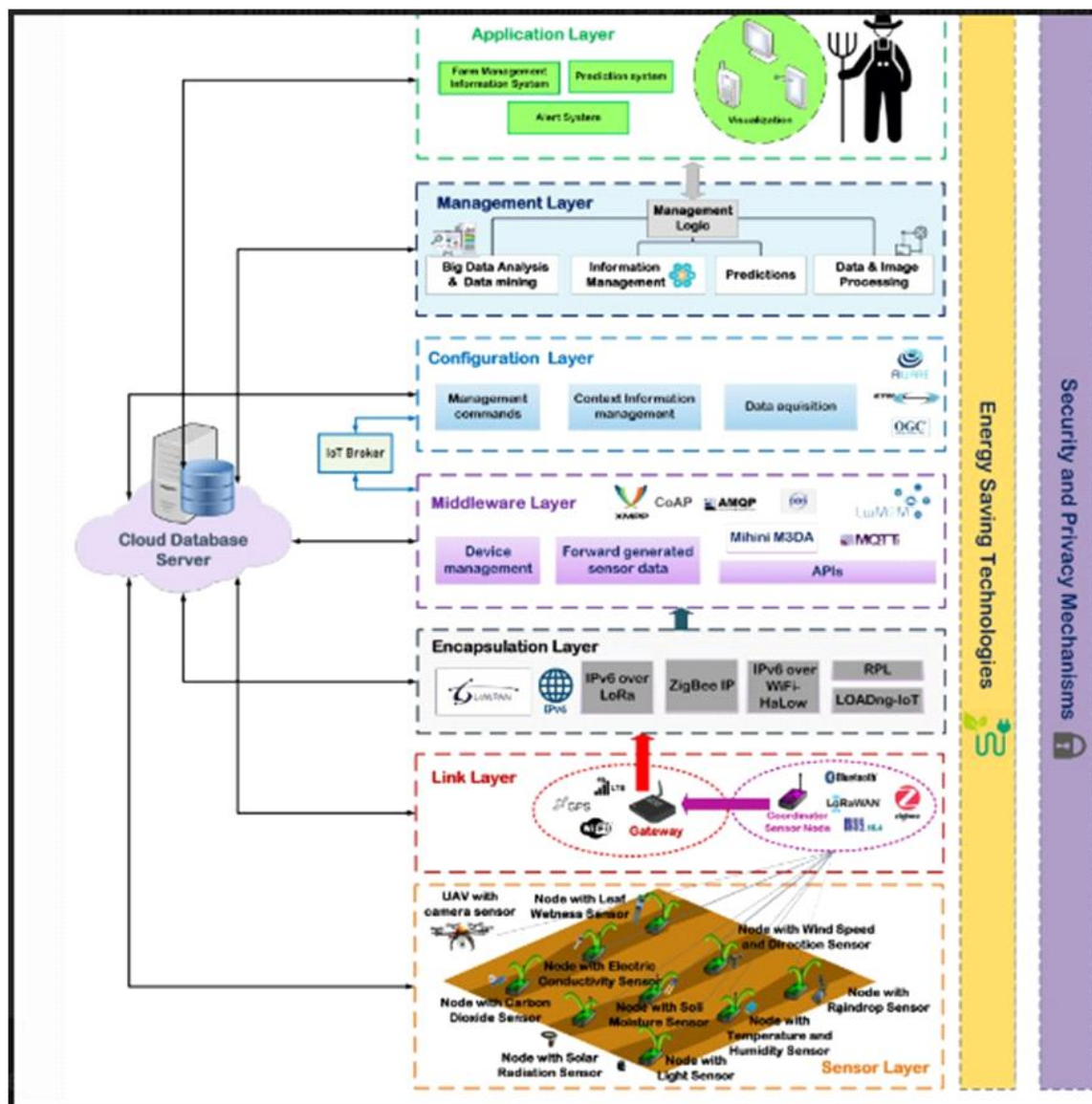


## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMID33827
Project Name	Smart Farmer-IOT enabled Smart Farming application
Maximum Marks	4 Marks

### Technical Architecture:

The deliverable shall include the architectural diagram as below and the information as per the table 1 and table 2



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

S.No	Component	Description	Technology
•	User Interface	How user interacts with application e.g. Mobile App ,etc.	Ubidots,BigHaats
•	Application Logic-1	Logic for a process in the application	Python –Raspberry pi
•	Application Logic-2	Logic for a process in the application	IBM Watson STT service
•	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
•	Database	Data Type, Configurations etc.	CrateDB
•	Cloud Database	Database Service on Cloud	IBM Cloudant DB
•	File Storage	File storage requirements	IBM Watson Studio ,IBM Cloud
•	External API-1	Purpose of External API used in the application	IBM Weather API etc.
•	External API-2	Purpose of External API used in the application	IBM Cloud etc.
•	Infrastructure(server or cloud)	Application deployment for local system or cloud	Cloud database server

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
•	Open-Source Frameworks	A framework is presented for smart agriculture using sensor network and IOT.The key feature of the system are deployment of smart sensor for the collection of data,cloud based analysis and decision based on monitoring for spraying and	Technology used is Big data,cloud,IOT,AI.

		weeding.	
•	Scalable Architecture	Scalability can be done by the use of soil moisture,NPK,LDR and electro chemical sensors which involve measuring accurate amount of water,soil and nutrient content,moisture level and proper measuring of variation in the intensity of sunlight	Technology used is sensors and GPS technology,analytical tools for monitoring crops.
•	Availability	The availability of sensors and their working progress will happen always even in the absence of farmers.	Technology used is harvest automation,autonomous tractors.

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