VSB ENGINEERING COLLEGE, KARUR-639111

Department Of Electronics And Communication Engineering

Design Phase II

Technology Stack

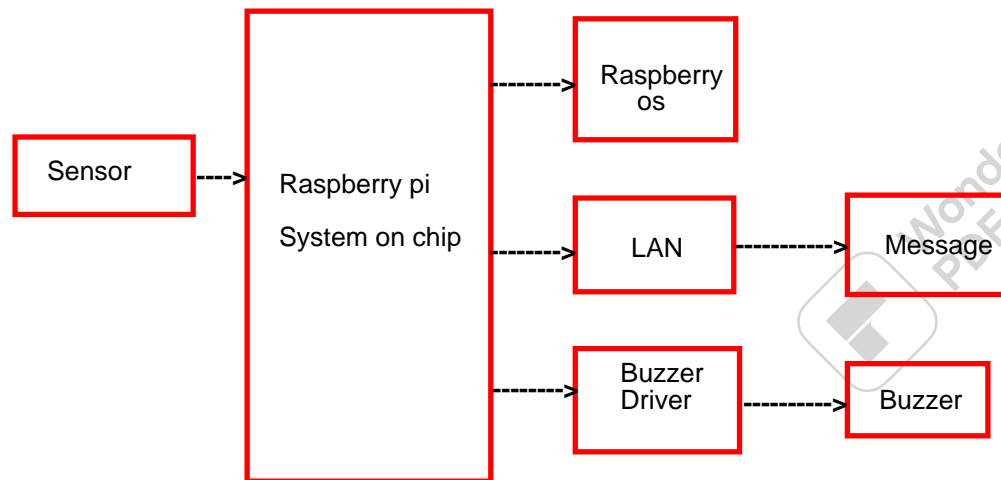**TITLE** : IOT-Based Smart Crop Protection System for Agriculture

DOMAIN NAME : Internet of Things

TEAM ID : PNT2022TMID33625

TEAM LEADER : TharunaPriya S

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Technical Architecture:

Guidelines:

Include all the processes (As an application logic / Technology Block)
Provide infrastructural demarcation (Local / Cloud)
Indicate external interfaces (third party API's etc.)
Indicate Data Storage components / services
Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
	User Interface	Web UI, SMS etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
1.	Application Logic-1	Logic for a process in the application	Python
2.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
3.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Purpose of External API used in the application	IBM Sensor API, etc.
8.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
9.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
10.	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	*The Internet of Things System (IoT) refers to the set of devices and systems that stay interconnected with real-world sensors and actuators to the Internet	Internet of Things.
2.	Security Implementations	*we can use sensors for detecting surroundings *We can use buzzer to alert the farmer	Sensing technology.
3.	Scalable Architecture	*It is clearly explained the IoT concept ,crop damage issues and the need of using smart crop protection System *Crop production will be increased	Internet of Things
4.	Availability	*This system is developed using board programmed in embedded C and interfaced with sensing the surroundings *It is available both in online and offline	Microchip technology
5.	Performance	*The novelty of the work is that the system automatically alert the farmer by sending sms ,when animals enter into the fields	PIR sensor.