**Project Design Phase-II**

**Data Flow Diagram & User Stories**

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID20093 |
| Project Name | Project - IoT Based Smart Crop Protection System for Agriculture |
| Maximum Marks | 4 Marks |

**Data Flow Diagram:**

**Test in real time**

**Message alert to farmers**

**Data processing**

**Cattle, temperature detection**

**Data acquistion**

**Implementation**

**of Arduino UNO**

**Prediction**

**Install and import sensors**

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**Flow:**

* We start collecting data from cloud services and collect a bunch of data from sensors.
* Save data in the form of numpy arrays.
* We then implement arduino UNO with our stored data.
* The number of sensors for the model is determined by us, if we increase the number of sensors, the accuracy increases. But it requires much more time for implementing more sensors.
* Once detection is done, we can use this model for real time cattle detection and simultaneously used to detect water level and temperature in the field.

**User Stories:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Type** | **Functional Requirement**  **(Epic)** | **User Story Number** | **User Story/Task** | **Acceptance Criteria** | **Priority** | **Release** |
| Developer | System Building | USN-1 | Collect dataset | I can collect dataset | High | Sprint-1 |
|  |  | USN-2 | Collecting data from sensors | I can collect data from sensors | High | Sprint-1 |
|  |  | USN-3 | Implementing arduino UNO from data collection |  | High | Sprint-2 |
|  |  | USN-4 | Message alert to farmers | I can receive message | High | Sprint-3 |
|  |  | USN-5 | Farmers identify the problem and resolve it by using mobile application | I can identify the problem and I try to resolve it | medium | Sprint-3 |
| customer  (web user) | Adoption | USN-1 | Adopting new technology for boosting production | I can adopt new technology | Low | Sprint-1 |
|  | Detection | USN-2 | Detect the ratio of defected crops on land | I can detect the defected crops | High | Sprint-2 |