**Project Design Phase-I**

**Proposed Solution Template**

|  |  |
| --- | --- |
| Date | 19 September 2022 |
| Team ID | PNT2022TMID34083 |
| Project Name | Smart Farmer - IoT Enabled Smart Farming Application |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | * Mostly the farmer pumps the water either much or less to cultivate his field. Therefore result in problem of wastage of water or inadequate to the crops. * Farmer's hard work is damage by insects and pests therefore results in big loss to farmers. * High reliability is required about weather information which decreases the problems of crop damage. * Maintenance of different parameters such as storehouse temperature, shipping route system, joins cloud-based systems. |
|  | Idea / Solution description | * Agriculture in IOT is connecting with both Web Map Service and Sensor Observation Service to ensure proper management of water for farming and removes the problem of wastage of water. * Agriculture in IOT system precise and maintains different parameters such as storehouse temperature, shipping route system, joins cloud based systems. It protects the quantity of different foods and grains from unnecessary wastages in government warehouses. * Greenhouse Automation Systems works on all sides the clock to increase the climate in greenhouse, increasing of crop yields, also helps to reducing the energy of costs and its labour costs. * Damage by insects and pests therefore results in big loss to farmers. To prevent this problem IOT in agriculture has a system that detects their movement of predators using PIR sensors. * High reliability is required about whether the information which decreases the problems of crop damage. Smart Farming in IOT makes exact delivery of real-time information on the weather changing, soil quality, labor cost and many more to farmers. |
|  | Novelty / Uniqueness | **ALERT MESSAGE:** IoT sensor nodes collect information from the farming environment such as soil moisture, air humidity, temperature, nutrient ingredients, pest images, and water quality ,then transmit the collected data to IoT backhaul devices  **REMOTE ACCESS:** Customized plantation recommendations that includes farmer group of interests and live plantation data in the area. Helps farmers to operate motors from anywhere  PROFIT: Maximum win-win profit mapping between buyers and farmers. |
|  | Social Impact / Customer Satisfaction | * Gathers information from various users through preconfigured devices and manages data in cloud database. * Provides required information to users automatically. * Improve the customer satisfaction through self- management of resources. * Easily identify maintenance needs, build better products, send personalized communications, and more. * IoT can also help e-commerce businesses thrive and increase sales |
|  | Business Model (Revenue Model) | “IoT has the potential to make the workplace life and business processes much more productive and efficient,” Cronin said. One significant way IoT will increase productivity and efficiency is by making location tracking and location-based services seamless and straightforward.  C:\Users\user\Pictures\Saved Pictures\Untitled (3).png |
|  | Scalability of the Solution | Increasing the number of sensors had a negligible impact on the Performance of the system, therefore, the proposed platform was scalable |