IDEATION

SmartFarmer - IoT Enabled Smart Farming Application

1) Monitoring of climate conditions

The most popular smart agriculture electronics are weather stations, combining varioussmart farming sensors. Across the field, they collect various data from the environment and upload it to the cloud. These measurements can be used to map the climate conditions, choose the appropriate crops, and take the required measures to improve their capacity.

2) Greenhouse automation

The use of manual intervention to control the greenhouse environment and IoT sensors enables them to get accurate real-time information on greenhouse conditions such as lighting, temperature, soil condition, and humidity.

Adding to the sourcing environmental data, weather stations can automatically adjust the conditions to match the given parameters. Specifically, greenhouse automation systems use a similar principle.

3) Crop management

The most common type of IoT product in agriculture and another element of precision farming arecrop management devices. Just like weather stations, they should be placed in the field tocollect data specific to crop farming; from temperature and precipitation to leaf water potential and overall crop health.

Enabling us to monitor your crop growth and any anomalies to effectively prevent any diseases or infestations that can harm your yield.

4) Cattle monitoring and management

Just like crop monitoring, there are IoT agriculture sensors that can be attached to the animals on a farm to monitor their health and log performance. Livestock tracking and monitoring help collect data on stock health, well-being, and physical location.

For example, such sensors can identify sick animals so that farmers can separate them from the herd and avoid contamination. Using drones for real-time cattle tracking also helps farmers reduce staffing expenses. This works similarly to IoT devices for petcare.

5) Agricultural drones

Foremost one of the most promising agro-tech advancements is the use of agricultural drones in smart farming. Also known as UAVs (unmanned aerial vehicles), drones are better equipped

than airplanes and satellites to collect agricultural data. Apart from surveillance capabilities, drones can also perform a vast number of tasks that previously required human labor: planting crops, fighting pests and infections, agriculture spraying, crop monitoring, etc.

6) End-to-end farm management systems

Unique approach to IoT products in agriculture can be represented by the so-called farm productivity management systems. They usually include a number of agricultures IoT devices and sensors, installed on the premises as well as a powerful dashboard with analytical capabilities and in-built accounting/reporting features.

This offers remote farm monitoring capabilities and allows you to streamline most of the business operations. Similar solutions are represented by Farm-Logs and Crop-io.

In addition to the listed IoT agriculture use cases, some prominent opportunities include vehicle tracking (or even automation), storage management, logistics, etc.