PROPOSED SOLUTION
SMART FASHION - IoT ENABLED SMART FARMING APPLICATION

PROBLEM STATEMENT:

In order to meet the current global needs of humanity, new solutions and technologies are constantly being proposed and implemented. This has led to the advent of the Internet of Things (IoT). IoT is defined as the network of all objects that are embedded within devices, sensors, machines, software and people through the Internet environment to communicate, exchange information and interact in order to provide a comprehensive solution between the real world and the virtual world.

IDEA/SOLUTION DESCRIPTION:

- ✓ IoT ecosystem Architecture for smart Agriculture
- ✓ Communication Technology
- ✓ Data Analytics and Storage Solutions
- ✓ Monitoring
- ✓ Tracking and Tracing
- ✓ Smart Precision Farming
- ✓ Greenhouse Production
- ✓ Economic Efficiency

NOVELTY/UNIQUENESS:

Embedded systems are programmable interactive modules, namely FPGAs (field programmable gate arrays). Sensor devices are specially designed to operate in open environments, in nature, in soil, water, and air to measure and collect environmental parameters that affect production, such as soil nutrients, humidity, temperature, etc. Smart farming solutions are agricultural operations that are often deployed on large farmlands, outdoors, so the devices that support solutions need some unique characteristics, such as the ability to withstand the effects of weather, humidity, and temperature instability throughout their service lifecycle.

SOCIAL IMPACT/CUSTOMER SATISFACTION:

In the smart agriculture domain, besides the main problems of sensing, collecting data, and controlling devices to respond to the real farming environment, data storage and processing are also important problems and face some challenges. In reality, the number of collected data is huge, and traditional data storage, organization, and processing solutions are not feasible. Therefore, big data processing solutions need to be researched and applied for smart agriculture.

BUSINESS MODEL (FINANCIAL BENEFIT):

The benefits and challenges, open issues, trends, and opportunities of IoT in the smart agriculture sector are organized as follows:

- ✓ work
- ✓ IoT ecosystem

architecture for smart agriculture that consists of three main components:

- ✓ IoT devices
- ✓ communication technology
- ✓ data storage and big data processes

The IoT applications in agriculture, including

- ✓ monitoring
- ✓ tracking and traceability
- ✓ precision agriculture
- ✓ greenhouses

Some open issues and future research challenges of IoT for smart agriculture are two main directions:

- ✓ business and technology

SCALABILITY OF SOLUTION:

The survey results indicate that IoT components for the smart agriculture sector, including hardware and software, have been focused on research and achieved many breakthrough results. Several IoT solutions have been deployed on large-scale farms/fields. However, the widespread deployment of IoT in the agricultural sector still presents some challenges. We have present two main problems: economic efficiency and technical problems. We consider these issues coupled with policies that will drive the integration of IoT technologies in agriculture.