- **Environmental Monitoring using Internet of Things**

1. *PROJECT OF DESCRIPTION*

Artificial Intelligence has long been in Existence, and it finds myriads of uses across the different business sectors. Coming to some of Its unconventional methods, then AI finds Application in environmental monitoring. Yes, we All know that AI, ML or IoT have increased their.Presence in our life in different ways, but only.A few of us understand how dramatically these.Technologies have brought in the paradigm change.In recent years, we have seen companies realizing.The growing importance of artificial intelligence Training and machine learning training. The aim Of these technologies is to enhance theFunctioning of the system and make them work moreLike a human. Well, it requires the expertise ofExpertise, and so we have a higher demand forArtificial intelligence experts and ML experts.But, in this blog, we are going to highlight howIoT, ML and AI are making an impact of Environmental monitoring.

2. PROJECT OF IMPLEMENTATION

When the concept of DSNs was first introduced more than two decades ago,[1] it was more a vision than a technology ready to be exploited. The early researchers in DSN were severely handicapped by the state of the art in sensors, computers, and communication networks. In work proposed in [2], the design and deployment of the real time water quality monitoring system for drinking water using wireless sensor network has been presented. Recent advancement in wireless communications and electronics has enabled the development of low-cost sensor networks. The sensor networks can be used for various application areas (e.g. health, military, home). For different application areas, there are different technical issues that researchers are currently resolving. The current state of the art of sensor networks is captured in this article, where solutions are discussed under their related protocol stack layer sections. The article presented in [3] also points out the open research issues and intends to spark new interests and developments in this fiel
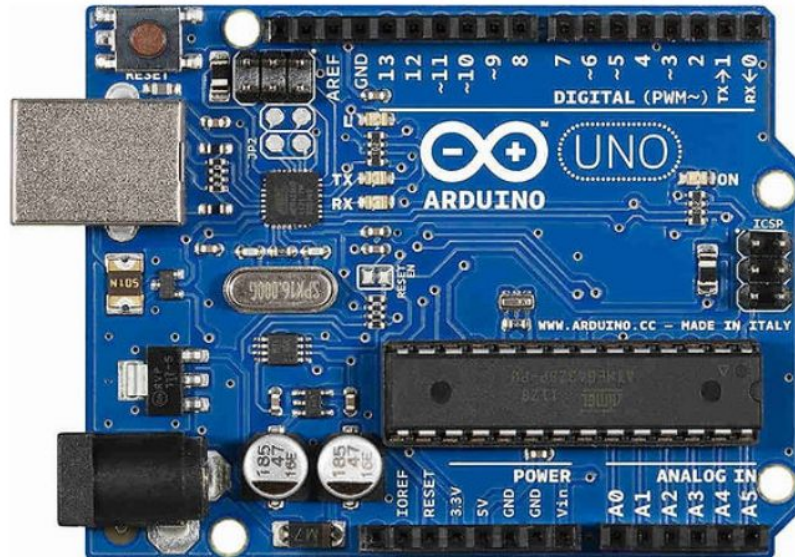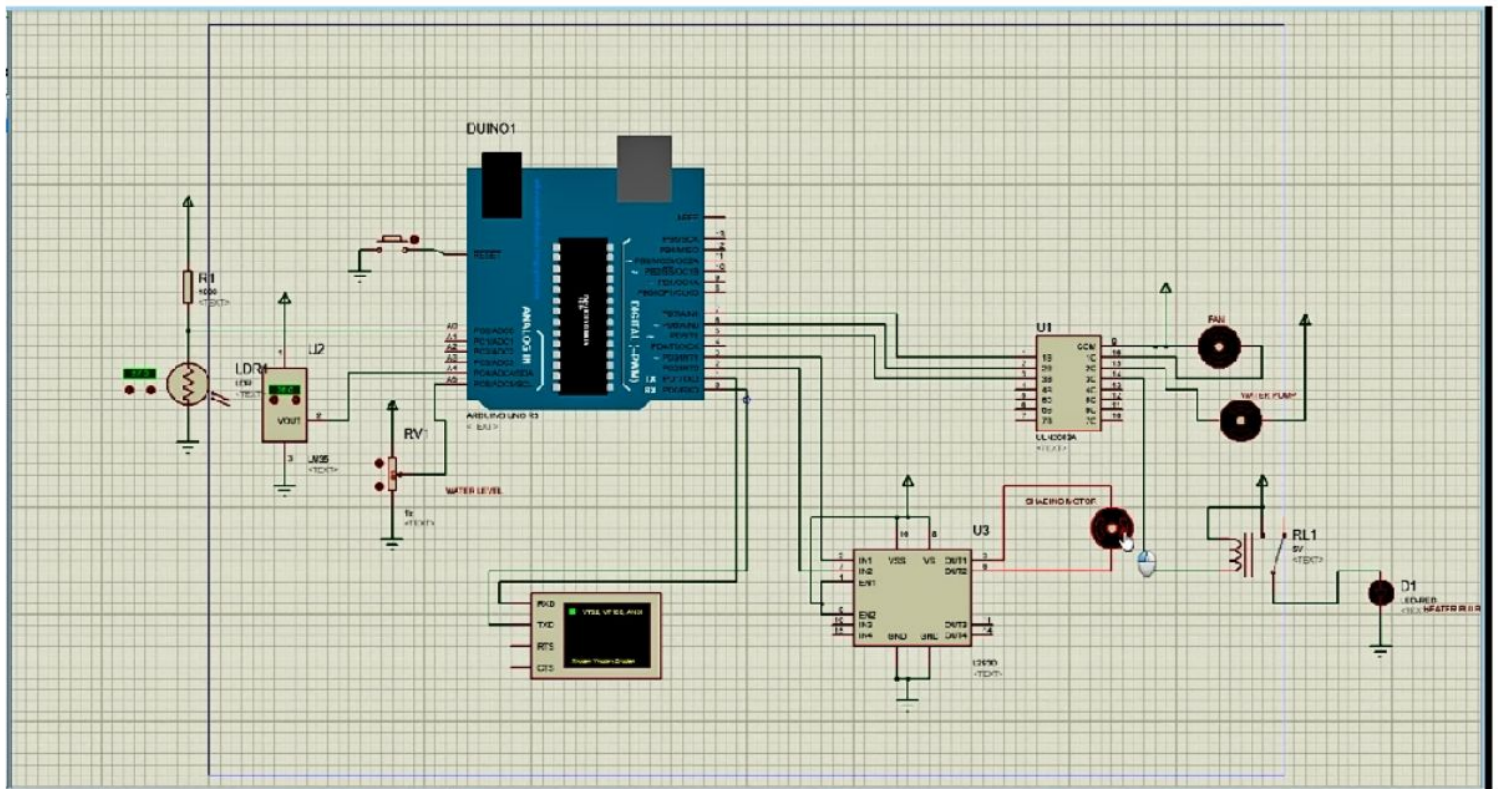
3.SENSORS

Fig: Arduino

Fig: Resistor

Fig:IC L293D

4.CIRCUIT DIAGRAM

Greenhouse Environmental Monitoring

5.SOURCE CODE

```cpp
// TemperatureSensor.cpp

#include "TemperatureSensor.h"

Const int TemperatureError = -1000;

// Function declarations

// Name: TemperatureSetup
// Parameters: int SensorPin – the pin the sensor is attached to
// Returns: True if the setup succeeds, false if it fails
Bool TemperatureSetup(int SensorPin)
{
  Serial.println("Temperature sensor setup not yet implemented");
```

```
  Return false;
}


// Name: TemperatureLoop
// Parameters: int SensorPin – the pin the sensor is attached to
// Returns: The current temperature, in degrees Celsius, or int.min if it has not been setup yet
Int TemperatureLoop(int SensorPin)
{
  // TOOD: Implement this function
  Serial.println("Temperature sensor loop not yet implemented");

  // Return an error
  Return TemperatureError;
}
```

Sample Output


```
Its HOT, Turn ON the FAN : 31.25 *C
Its BRIGHT, Turn off the LED :    472
Water level is LOW, Turn ON the Pump : 102
Its HOT, Turn ON the FAN : 31.25 *C
Its BRIGHT, Turn off the LED :    472
Water level is LOW, Turn ON the Pump : 102
Its HOT, Turn ON the FAN : 31.25 *C
Its BRIGHT, Turn off the LED :    472
Water level is LOW, Turn ON the Pump : 102
Its HOT, Turn ON the FAN : 31.25 *C
Its BRIGHT, Turn off the LED :    472
Water level is LOW, Turn ON the Pump : 102
```

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