

SMART WATER SYSTEM

PROJECT OBJECTIVES

- To implement IoT sensors to monitor water consumption in public places such as parks and gardens.
- To make real-time water consumption data publicly available to promote water conservation.

THE IOT SENSOR SYSTEM WILL CONSIST OF THE FOLLOWING COMPONENTS:

- **Sensors:** The sensors will be used to measure the flow rate and volume of water consumed at each public place. Some suitable sensors include ultrasonic flow meters, magnetic flow meters, and vortex flow meters.
- **Gateway:** The gateway will be used to collect data from the sensors and transmit it to the data-sharing platform. The gateway can be a Raspberry Pi or other microcontroller device.
- **Communication:** The communication between the sensors and the gateway can be done using Wi-Fi, cellular, or LoRaWAN.

PROJECT IMPLEMENTATION

1. Define the locations where the IoT sensors will be installed.
2. Choose the appropriate IoT sensors and communication method.
3. Install the sensors and gateway at the selected locations.
4. Configure the sensors and gateway to transmit data to the data-sharing platform.
5. Develop the data-sharing platform using Python and Flask.
6. Deploy the data-sharing platform to a web server.

PROJECT DEPLOYMENT

1. Deploy the data-sharing platform to the production web server.
2. Set up a production web server to host the data-sharing platform.
3. Make the data-sharing platform publicly accessible.

PROMOTING WATER CONSERVATION:

- Once the data-sharing platform is deployed, it can be used to promote water conservation by making real-time water consumption data publicly available. This data can be used by park and garden visitors to see how much water is being consumed and to take steps to conserve water. For example, visitors may be more likely to turn off the water while brushing their teeth or washing their hands if they can see how much water they are using.
- The data from the data-sharing platform can also be used to develop educational campaigns about water conservation. For example, the data could be used to create a map that shows the water consumption of different parks and gardens. This map could be used to identify parks and gardens where water conservation is needed.

CONCLUSION

- By implementing IoT sensors to monitor water consumption in public places and making real-time data publicly available, this project can help to promote water conservation and reduce water usage.