

# Smart Irrigation System

**Dr .Manisha Pise<sup>1</sup>, Shreya Dange<sup>2</sup>, Achal Battulwar<sup>3</sup>, Kirti Chandawar<sup>4</sup>,  
Achal Chamate<sup>5</sup>, Dikshita Mase<sup>6</sup>**

<sup>1</sup>Assistant Professor, Computer Science Engineering Department

<sup>1-6</sup>Students, Computer Science Engineering Department

Rajiv Gandhi College of Engineering Research and Technology, Chandrapur

**Abstract:** *Smart Irrigation System using IoT technology are gaining significant attention as an efficient solution to the water scarcity challenge in agriculture. These systems consist of sensors, controllers, and a cloud-based platform that collects real-time data about soil moisture content, weather conditions, and plant water requirements. The data is analyzed and used to regulate water supply to the crops, resulting in reduced water consumption and significant savings in water resources. Field experiments have shown that Smart Irrigation System can increase crop yields by 25% and reduce water consumption by 40%. This system is designed to be automated and allows users to monitor and control the irrigation process remotely through a smartphone app or a web interface, making it easy for farmers or gardeners to manage their irrigation systems from anywhere, at any time. The Smart Irrigation System helps to conserve water by using only the required amount of water and preventing over-watering, leading to a significant reduction in the cost of irrigation. The system has the potential for large-scale deployment and can benefit farmers worldwide, making it a powerful tool to optimize irrigation processes, conserve water, and improve crop yields.*

**Keywords:** IoT Technology, Water Optimization, Smart Irrigation, Water Conservation, Precision Agriculture

