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| Book Name: | **Intelligent IoT Systems: From Research to Real-World Solutions** |
| Manuscript Number: | **Ms\_BPR\_6282.1** |
| Title of the Manuscript: | **Smart Water Management Using IoT: An Integrated Approach to Conservation and Automation** |
| Type of the Article | **Book Chapter** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This manuscript is important for the scientific community as it presents a comprehensive and integrated approach to smart water management using IoT. Unlike many existing works that focus on isolated functionalities such as water level monitoring or leak detection, this study consolidates multiple critical features—water level tracking, leak detection with occupancy awareness, and automated rainwater harvesting—into a unified, low-cost, and scalable system. The results demonstrate high accuracy, reliability, and responsiveness, highlighting its potential for real-world residential and urban applications. By bridging IoT technologies with sustainable resource management, the manuscript contributes to advancing research in smart infrastructure, environmental sustainability, and the practical deployment of IoT-based solutions in water conservation. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **yes** |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. |  Keep the abstract **concise (250–300 words)** by trimming sensor names and technical minutiae.   Strengthen the **application/impact statement** (why this matters for society, sustainability, and future IoT adoption). |  |
| **Is the manuscript scientifically, correct? Please write here.** |  **Testing Scale:** Validation was done only on a small prototype and under simulated conditions. While results are promising, they may not fully represent performance in real-world, long-term deployments (e.g., outdoor tanks, power fluctuations, sensor degradation).   **Limited Metrics:** The reported accuracy (90–95%) is based on unspecified test repetitions and sample sizes. More statistical analysis (e.g., mean absolute error, standard deviation across multiple runs) would strengthen scientific rigor.   **Power Supply Dependence:** The solenoid valve failure due to power interruption highlights a vulnerability. This is noted, but not scientifically addressed (e.g., by suggesting backup power or fault recovery).   **Comparison to Prior Work:** Although references are cited, the manuscript does not quantitatively compare its performance with existing systems. That makes it harder to judge how significant the improvements are.   **Generality of Results:** The system is tailored to standard residential tanks. Scalability to community/urban infrastructure is mentioned but not experimentally verified. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | The references are **recent enough and broadly sufficient**, but for IEEE publication standards, the list should:   * **Reduce reliance** on lower-quality sources (non-indexed/low-impact journals). * **Add more IEEE, Elsevier, and Springer articles** from 2021–2024 to reinforce credibility. * **Include a few foundational works** in smart water management and IoT architectures for completeness. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes |  |
| Optional/General comments |  |  |

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| **PART 2:** | | |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in detail)yes* |  |

**Reviewer details:**

**Sangamesh Hosgurmath, India**