Dear Sir/Madam,

I am writing to submit our manuscript entitled "**Synergizing Technology and Sustainability: Leveraging Federated Average Distilled Conditional Learning in Waste Segregation and Identification for Nature Conservation**" to be considered for publication in **Waste Management**. We believe that this manuscript presents innovative research and aligns well with the scope and high standards of your esteemed journal.

The objective of this study is to address the need for a secured decentralized Waste management system based on image analysis using Federated Learning with applications of knowledge distillation and conditional mutual learning and averaging. Furthermore, our manuscript covers important aspects related to Waste management and segregation, including effects on pollution, nature degradation and ways to tackle it better using newer technologies like the one we proposed to increase sustainability and enhance waste management techniques. I am confident that the information in my abstract will be of great interest to your readers. The information provided in this abstract can help researchers, practitioners, and students comprehend the most recent developments in this subject and how they might be used to address other sustainability and waste management issues. We confirm that this manuscript has not been published previously and is not currently under consideration for publication elsewhere. We have followed the guidelines and formatting requirements provided by Waste Management journal meticulously during the preparation of the manuscript.

Thank you for considering our submission. We are confident that our research will make a significant contribution to the field of environment and waste management and bring in more advanced technologies to handle such issues. We appreciate the opportunity to submit our work to Waste Management and look forward to your favourable response.

Sincerely,

Dr. PARTHIBAN K

Assistant Professor Sr. Grade 1

8778837811, 9677737387

[k.parthiban@vit.ac.in](mailto:k.parthiban@vit.ac.in)

Vellore Institute of Technology Vellore,

Tamil Nadu-632014, India