



## Chapter 13

### **A review on predictive models designed from artificial intelligence techniques in the wastewater treatment process**

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#### **ABSTRACT**

Modeling and optimization of pollutant removal processes are the best solutions to increase the efficiency of wastewater treatment. The relationship between input and output parameters in wastewater treatment processes (WWTP) are complicated. Artificial intelligence (AI) models are generally more flexible when compared with statistical models while modeling complex datasets with nonlinearity and missing data. Studies on AI-based WWTP are increasing day by day. Therefore, it is crucial to review the AI techniques available which are implemented for WWTP. Such a review helps classifying the techniques that are invented and helps to identify challenges as well as gaps for future studies. Lastly, it can sort out the best AI technique to design predictive models for WWTPs.

#### **KEYWORDS**

Artificial intelligence; Wastewater treatment processes; Datasets

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