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BACKGROUND

M, C&B, L&W

MORE INFO

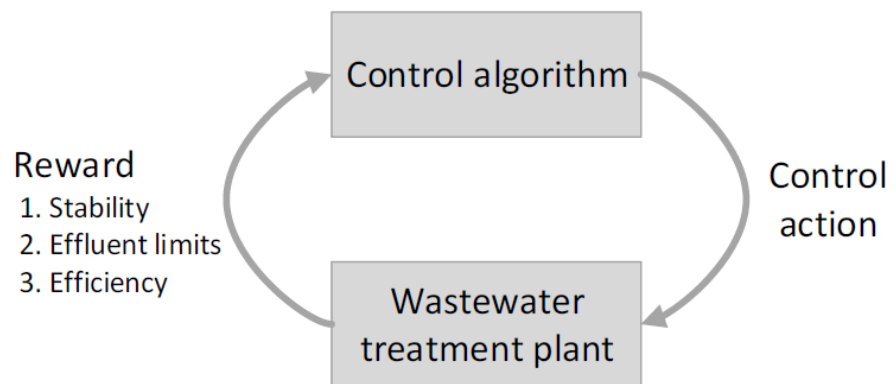
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Introduction

The operational strategy of a wastewater treatment plant (WWTP) tries to satisfy three successive objectives: keep the plant running, satisfy the effluent requirements, and maximise the efficiency. However, in practice, only the first objective is satisfied. Improving the control strategy can thus increase the consistency of meeting the effluent limits and efficiency of the WWTP, without endangering the safety of the plant.

Methodology

Reinforcement learning (RL) is a machine learning technique that learns through repeated interaction with an environment which actions to take so to maximise a reward/objective function. Recent advances in the field made it possible to apply these algorithms to high-dimensional problems, such as controlling a WWTP.



Scope of the thesis

This thesis aims to assess the applicability of RL as a control strategy for WWTPs. We will train these algorithms on a simulated WWTP and compare their performance to commonly used control strategies.

