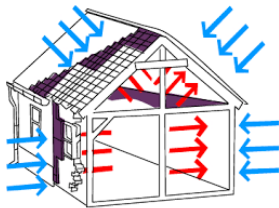


AI for Bill Reduction

MARKET NEED

- Nowadays, businesses have several incentives to reduce energy consumption, which is equivalent to lower energy bills and saved money. Given the fact that most of the world's energy is still produced from fossil fuel sources, reduced consumption also helps to combat climate change and lower environmental pollution.
- This project investigates the use of AI for the task of optimising energy usage in both commercial and domestic settings.
- The idea is to use reinforcement learning (RL), given the potential it has shown in solving complex optimisation problems.



TECHNOLOGY SOLUTION

We developed a web-based tool that offers state-of-the-art methods for energy optimisation with the following main components:

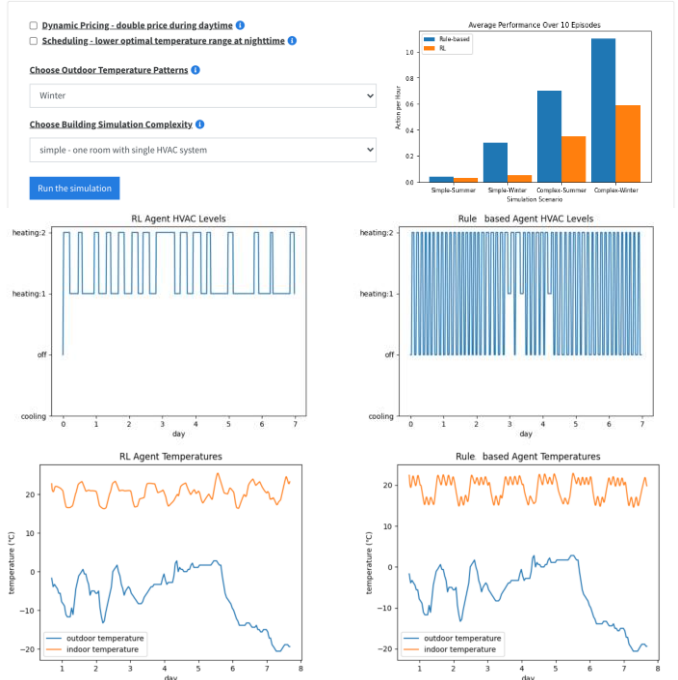
1. The use of a deep reinforcement learning method known as Deep Q-learning.
2. Creating a simple simulation environment for the task of energy optimisation in a domestic heating and cooling task.
3. The use of the OpenAI framework which allows the user to customise environment to increase complexity of task.

This application provides a simple simulation environment which allows for the comparison between RL and traditional energy optimization methods in a domestic heating and cooling scenario.

APPLICABILITY

The tool is targeted to show to any company or organisation, especially high consumption sectors such as manufacturing and heavy industries, the potential of using reinforcement learning methods for bill reduction.

Simulation Configuration



RESEARCH TEAM

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