NANYANG TECHNOLOGICAL UNIVERSITY
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Multi-Agent Pickup and Delivery

Through the Lens of an Automated Warehouse

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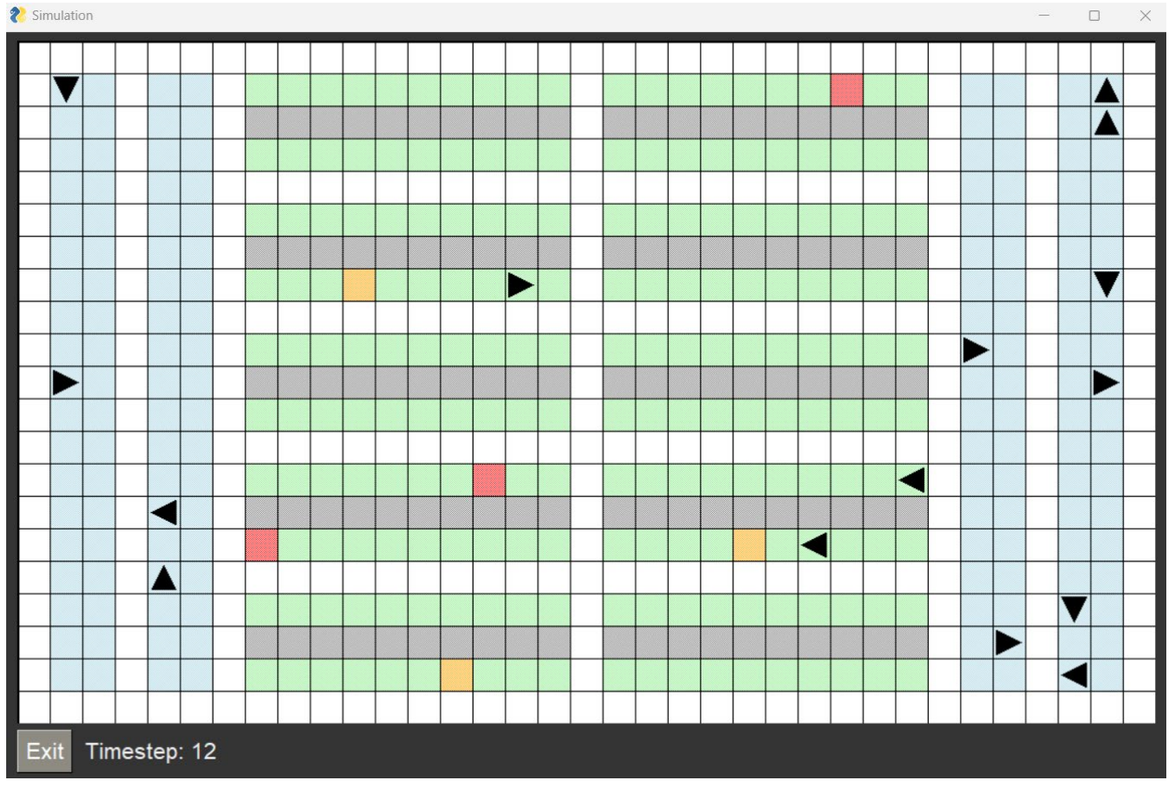
Background

The MAPD (Multi-Agent Pickup and Delivery) problem studies the coordination of multiple agents to complete a set of delivery tasks. Due to its ability to capture essential traits of real-life domains such as automated warehouses, it has been gaining traction in the field of research.



Objectives

- Study how different factors affect the performances of algorithms
- Study the effects of energy restrictions on the performances of decoupled MAPD algorithms
- Introduce variants of TP and TPTS for use with energy restrictions

Significance

Apart from finding significant relationships for energy restrictions and confirming relationships for factors previously published, the project also introduced a proof-of-concept on a unified platform for future MAPD developments which minimizes overhead during algorithm research and testing.