Exercise 2: A Reactive Agent for the Pickup and Delivery Problem

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1 Problem Representation

1.1 Representation Description

States correspond to the current city of the agent and the available task. We decided to represent them as a pair (`cityFrom`, `cityTo`) where `cityTo` is the city of delivery of the task and can be `null` if there is no task available. From a state (`cityFrom`, `cityTo`) possible actions are either to pickup the task or to move to a neighbour of `cityFrom`. The reward for a pair a state s and an action a is the value of the delivery (if the action is a pickup) minus the costPerKm times the distance travelled.

1.2 Implementation Details

2 Results

2.1 Experiment 1: Discount factor

2.1.1 Setting

2.1.2 Observations

2.2 Experiment 2: Comparisons with dummy agents

2.2.1 Setting

2.2.2 Observations

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2.3 Experiment n

2.3.1 Setting

2.3.2 Observations