Université libre de Bruxelles

Analyzing MARL algorithms in dynamic environments: Evaluating performance with an additional unknown element

Preparatory work for the master thesis -- MEMO-F-403

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Abstract

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I Introduction

I.1 Background and Objectives

A Multi-Agent Reinforcement Learning (MARL) is a subfield of the Reinforcement Learning domain which focuses on the interaction between multiple agents in a shared environment. Through the recent years, more and more research has been conducted in this field to resolve issue that has arisen in the reel world. However, most of the research are done through simulations on environments which does not involve incremental changes. This thesis aims to evaluate the learning performance of MARL algorithms from a know environment to an slightly modified one by adding an unknown element. Under the suppervision of Prof. Tom Lenaerts, and advisor Yannick Molinghen, from the Machine Learning Group (MLG) of the Université Libre de Bruxelles (ULB).

I.2 Related Work

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I.3 Structure of the Thesis

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I.4 Notations and Definitions

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II State of the Art

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