University of Innsbruck Faculty of Mathematics, Computer Science and Physics

Institute for Theoretical Physics



Bachelor Thesis submitted for the degree of Bachelor of Science

An information-theoretical approach to internal models in a Partially Observable Markov Decision Process

by Lukas Prader Matriculation Nr.: 12115058

Submission Date: 21st April 2024

Supervisors: Alexander Vining, Hans J Briegel

| Λ | bs | tr | 2 | _ | ŀ |
|---|----|----|---|---|---|
| А | บร | u | a | L | L |

Lorem ipsum

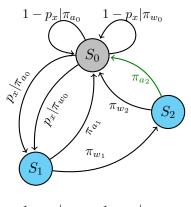
Contents

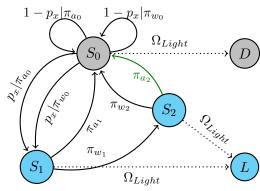
| 1 | Introduction | 1 |
|---|--------------------------|---|
| 2 | Results | 2 |
| | 2.1 Markov Process Plots | 2 |
| 3 | 3 Conclusion | |
| 4 | Acknowledgements | 5 |

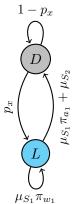
1 Introduction

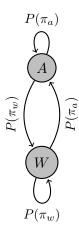
2 Results

2.1 Markov Process Plots









3 Conclusion

4 Acknowledgements

Declaration of Authorship

I hereby solemnly declare, by my own signature, that I have independently authored the presented work and have not used any sources or aids other than those indicated. All passages taken verbatim or in content from the specified sources are identified as such.

I consent to the archiving of this Bachelor thesis.

Innsbruck, 21st April 2024

Lukas Prader Wushade