Adrien Bolland

PhD Student

About me

I am a PhD student in artificial intelligence at the university of Liège doing researches in deep reinforcement learning with applications to the renewable energy transition. More specifically, my work focuses on applications of deep reinforcement learning for energy trading as well as on the adaptation of these algorithms to solve joint design and control problems. I am open to discuss or collaborate on research projects.

(+32) 4 79 96 96 77

https://adrienbolland.github.io/

adrien.bolland@uliege.be

Education

Since 2020	PhD student in reinforcement learning *Advisor : Damien Ernst (dernst@uliege.be)*.	University of Liège
2018 - 2020	Master student in electrical engineering in signal processing and intelligent robotics *Summa Cum Laude*.	University of Liège
2015-2018	Bachelor student in electrical engineering and computer science *Magna Cum Laude*.	University of Liège

Experience

2019	Internship at Engie Belgium Internship in the Market Modeling & Market View department.	Engie
2019	Junior researcher in deep RL. Internship in the Montefiore institute in RL.	University of Liège
2019	Summer school on bandits and RL. Summer school organized by Sequel and Inria.	University of Lille
2017 - 2019	Pupil-monitor. Monitor in applied geometry, C-language, electromagnetic energy conversion, and computer structures.	University of Liège

Publications

Jointly Learning Environments and Control Policies with Projected Stochastic Gradient Ascent
Adrien Bolland, Ioannis Boukas, Mathias Berger, Damien Ernst
arXiv preprint arXiv :2006.01738

Distributional Reinforcement Learning with Unconstrained Monotonic Neural Networks
Thibaut Théate, Antoine Wehenkel, Adrien Bolland, Gilles Louppe, Damien Ernst
arXiv preprint arXiv :2106.03228, 2021

Graph-Based Optimization Modeling Language : A Tutorial
Mathias Berger, Adrien Bolland, Bardhyl Miftari, Hatim Djelassi, Damien Ernst
preprint, 2021

A deep reinforcement learning framework for continuous intraday market bidding
Ioannis Boukas, Damien Ernst, Thibaut Théate, Adrien Bolland, Alexandre Huynen, Martin Buchwald, Christelle Wynants, Bertrand Cornélusse
Machine Learning, 2021

Teaching

Numerical Optimization

Reinforcement Learning

Energy Markets

Skills

Mathematics Algebra, Analysis, Numerical analysis and optimization, and System theory.

Applied Mathematics Deep Learning, Reinforcement Learning, Optimization, and Statistics.

Computer Science Programming techniques, Data structures and Computer structures.

Physics Global formation as an engineer with specialization in electromagnetism and electricity.

Language French native speaker and bilingual in Dutch. Professional proficiency in English.

Interests

I like music and played piano during three years. I have played tennis and I do ice-skating in my free time.