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SUN YAT-SEN UNIVERSITY

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你好

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School of Electronics And Information Technology
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1. Background



1.1 Reinforcement Learning

Introduction of MARL

In a nutshell



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Agents

MARL ^[1]

^[1] S. V. Albrecht, F. Christianos, and L. Schäfer, Multi-Agent Reinforcement Learning: Foundations and Modern Approaches. *MIT Press*, 2023.

Introduction of MARL

In a nutshell



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Agents

MARL ^[1]

Assumptions about the agents' rewards:

- Fully cooperative (Warehouse Management)
- Competitive (Go)
- Mixed (Automated Trading)

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Introduction of MARL

In a nutshell



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Agents

MARL ^[1]

Assumptions about the agents' rewards:

- Fully cooperative (Warehouse Management)
- Competitive (Go)
- Mixed (Automated Trading)

Type of solution concept the algorithm is designed:

- Minimax/Nash/Correlated equilibrium
- Pareto-optimality/social welfare/fairness
- No-regret
- etc.

^[1] S. V. Albrecht, F. Christianos, and L. Schäfer, Multi-Agent Reinforcement Learning: Foundations and Modern Approaches. *MIT Press*, 2023.



2. Multi-task & Continual



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2.1 Representations

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3. Conclusion

Challenges



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- Most

How



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- Practicality



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Thanks for Listening!