

# **XXXXXX & XXXXX XXXXXX**

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# Contents



# 1. Background

# 1.1 Reinforcement Learning

# Introduction of MARL

In a nutshell

Agents

MARL [1]

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[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

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

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.

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

## 2. Multi-task & Continual

# 2.1 Representations

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# 3. Conclusion

# Challenges

- Most

# How

- Practicality

# Thanks for Listening!