- Flat or modular or hierarchical
- Non-planning or finite stage or indefinite stage or infinite stage
- Explicit states or features or individuals and relations
- Perfect rationality or bounded rationality
- Knowledge is given or knowledge is learned from experience
- Fully observable or partially observable
- Deterministic or stochastic dynamics
- Goals or complex preferences (utility)
- Single-agent or multiple agents
- Reason offline or reason while interacting with environment

Some Representations

- Hier. Control Hierarchical control (Chapter 2)
- Search state-space search (Chapter 3)
- Det. Planning deterministic planning (Chapter 6)
- Decision Net decision networks (Chapter 12)
- MDP Markov decision processes (Chapter 12)
- Dynamic DN dynamic decision networks (Chapter 12)
- POMDP partially observable Markov decision processes (Chapter 12)
- Extensive game extensive form of game (Chapter 14)
- Q-Learning (Chapter 13)
- Deep RL deep reinforcement learning (Chapters 13/14)
- Stochastic PI stochastic policy iteration (Chapter 14)

	Hier. Control	Search	Det. Planning	Decision Net	MDP	Dynamic DN	POMDP	Extensive game	Q-Learning	Deep RL	Stochastic PI
Modularity											
flat	~	~	~	~	~	~	~	~	~	~	v
modular	~	X	×	~	×	×	×	×	×	×	×
hierarchical	~	X	×	X	×	×	×	×	×	×	×
Planning Horizon											
non-planning	1	X	×	X	×	×	×	×	×	×	×
finite	×	~	~	~	×	×	×	~	×	×	~
indefinite	X	~	~	X	~	~	~	~	~	~	×
infinite	×	×	×	X	~	~	~	×	~	~	×
Representation											
states	1	1	×	X	~	×	~	~	~	×	v
features	1	X	~	1	×	~	×	×	×	~	X
relational	×	×	×	×	×	×	×	×	×	×	×

	Hier. Control	Search	Det. Planning	Decision Net	MDP	Dynamic DN	POMDP	Extensive game	Q-Learning	Deep RL	Stochastic PI
Computational Limits											
perfect	1	1	~	1	X	×	X	~	×	X	×
bounded	X	X	×	X	1	~	~	×	~	~	~
Learning											
given	~	~	~	~	~	~	~	~	×	×	X
learned	×	×	×	×	×	×	×	×	~	~	~
Sensing Uncertainty											
fully obs.	~	~	~	X	~	~	×	×	~	~	v
partial obs.	X	X	×	V	X	×	~	~	×	×	×
Effect Uncertainty											
deterministic	~	~	~	×	×	×	×	×	×	×	X
stochastic	X	X	X	~	1	1	1	V	1	1	~

	Hier. Control	Search	Det. Planning	Decision Net	MDP	Dynamic DN	POMDP	Extensive game	Q-Learning	Deep RL	Stochastic PI
Preference											
goals	X	1	1	X	X	×	X	X	×	X	×
utility	X	X	×	~	1	~	1	~	~	~	1
Number of Agents											
single	1	1	1	1	1	1	1	X	1	1	×
adversary	×	X	×	X	×	×	×	~	~	~	1
multiple	~	X	×	X	×	×	×	~	×	×	~
Interactivity											
offline	×	1	~	V	~	~	~	~	×	×	×
online	~	X	×	X	×	×	×	×	~	~	1

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Markov Decision Processes (MDPs)

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Decision-theoretic Planning

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Relational Reinforcement Learning

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Classical Game Theory

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Humans

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