test_kable

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AI	Artificial Intelligence
ALE	Arcade Learning Environment
ANN	Artificial Neural Networks
API	Application programming interface
CA	Cellular Automata or Cellular Automaton
CAM	Cellular Automata Machines
DQN	Deep Q-Networks
DRL	Deep Reinforcement Learning
DSM	Drossel ans Schwabl Model
FFEM	Forest Fire Environment Maker
MDP	Markov Decision Process
ML	Machine Learning
MLP	Multilayer Perceptron
OAGA	Open AI Gym API
POMDP	Partially Observable Markov Decision Process
RL	Reinforcement Learning

Table 1: Comparision of obtained returns from the nine runs. The return was computed from playing 100,000 steps per run following the learned policy. The runs are ordered from best to worst and are named from *a* to *i*, the "heuristic" and "random" baselines are marked as "H" and "R" respectively.

Run	Return	Exploration	Unrolling	Architecture	LR	Batch Size	Gamma
c	640,658	heuristic	2	A3	0.0001	16	0.99
a	638,094	linear	2	A1	0.0003	32	0.99
d	615,091	heuristic	3	A3	0.0003	32	0.99
i	591,021	linear	2	A3	0.0003	32	0.99
g	507,313	linear	10	A3	0.0003	32	0.99
H	**503,521**						
b	327,597	linear	1	A2	0.0001	256	0.90
R	**319,833**						
h	294,965	linear	1	A3	0.0001	16	0.99
f	293,722	heuristic	1	A3	0.0003	32	0.99
e	293,600	heuristic	1	A2	0.0001	16	0.90

Table 2: How different models handle *state*, *space* and *time*. "C" stands for continuous and "D" for discrete. The discrete nature of CA is highlighted. Table adapted from the book "Simulating complex systems by cellular automata" (Hoekstra, Kroc, and Sloot 2010).

Type of model	State	Space	Time
Partial differential equations (PDEs)	C	C	C
Integro-difference equations	C	C	D
Coupled ordinary differential equations (ODEs)	C	D	C
Interacting particle systems	D	D	C
Coupled map lattices (CMLs)	C	D	D
Systems of difference equations	C	D	D
Lattice Boltzmann equations (LBEs)	C	D	D
Cellular Automata (CA)	**D**	**D**	**D**
Lattice gas automata (LGAs)	D	D	D