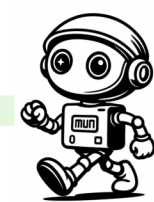
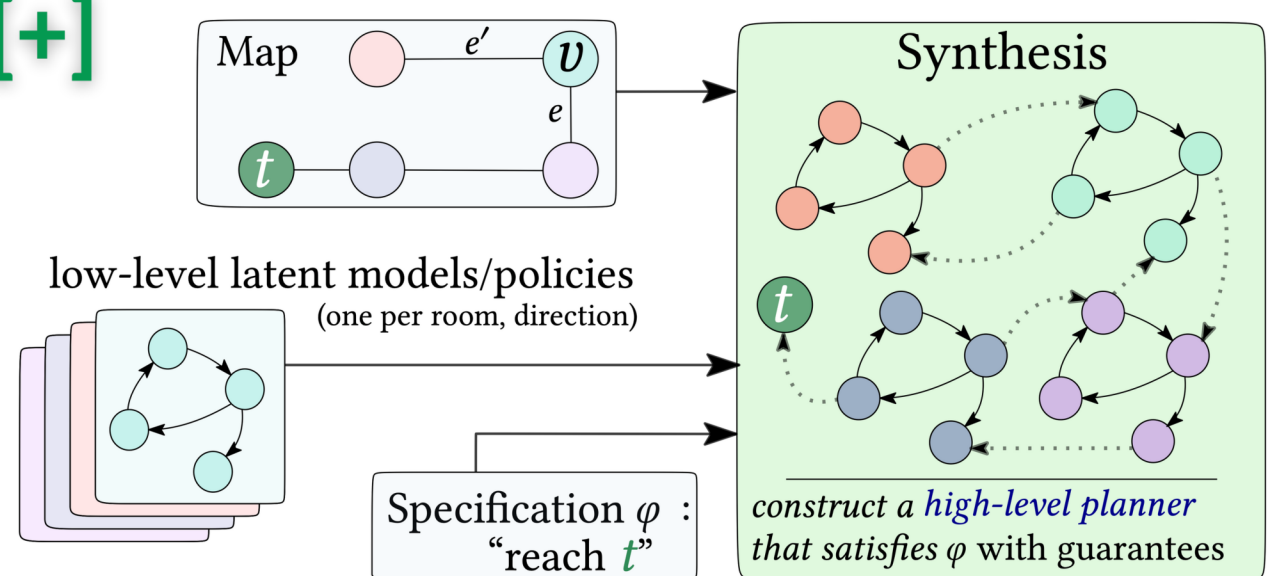


The logo for Detroit aamas2025 features a stylized skyline of Detroit's skyline in black and yellow, with the word "DETROIT" in yellow and "aamas2025" in white and yellow below it.

Reactive Synthesis



- ## Environment



Latent Model

- $$L_{\mathbf{P}}^{v,e} = \mathbb{E}_{s,a \sim \pi_{v,e}} \text{TV}(\phi_{\#} \mathbf{P}(\cdot \mid s, a), \bar{\mathbf{P}}(\cdot \mid \phi(s), a))$$

- $$\left| V_v^{\pi_{v,e}}(\varphi) - V_{\frac{\mathcal{M}}{\mathcal{M}}}^{\pi_{v,e}}(\varphi) \right| \leq \underbrace{\text{AEL}(\pi_{v,e})}_{\text{Average Episode Length}} \cdot \frac{L_{\mathbf{P}}^{v,e}}{1-\gamma}$$

- **Lifting the guarantees** to the high-level:

Composed MDP

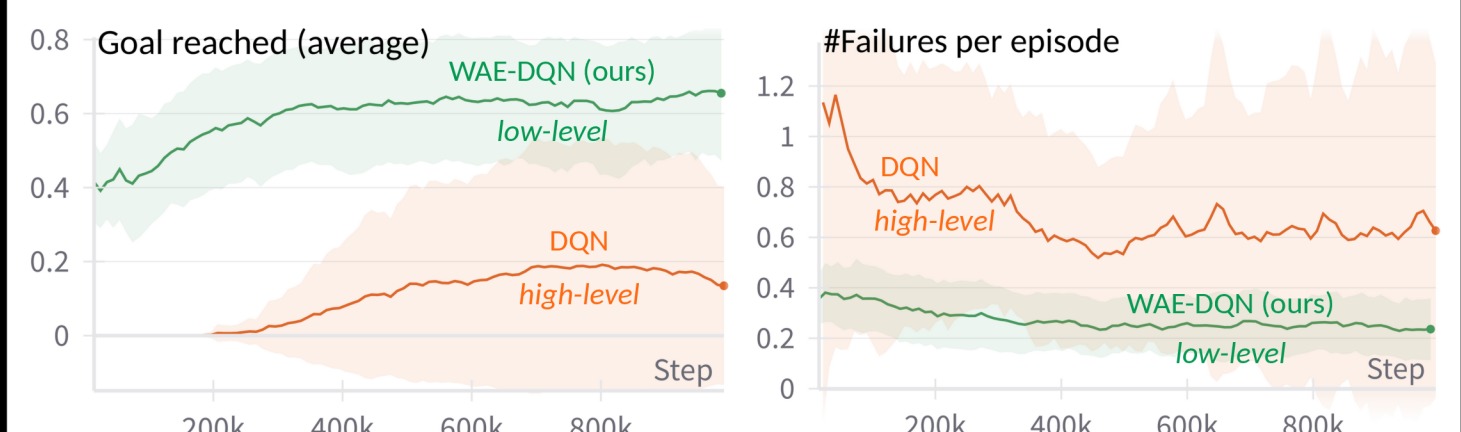
The diagram illustrates a Composed MDP (Markov Decision Process) with four clusters of nodes, each represented by a different color: red, cyan, purple, and green. Each cluster contains three nodes connected by solid arrows, forming a cycle. Dashed arrows connect nodes across different clusters, representing transitions between them. A large, stylized 'C' symbol is positioned to the right of the clusters. A green circle with a 't' inside is located near the bottom left cluster.

6

A 3x3 grid of 9 squares, each containing a different arrangement of dots. The top row has 1, 2, and 3 dots. The middle row has 4, 5, and 6 dots. The bottom row has 7, 8, and 9 dots. The dots are arranged in a pattern that suggests a magic square, with each row and column containing a unique set of dots.

	N	LP	A	avg. return ($\gamma = 1$)	latent value	avg. value (original)
Grid World	9	1	11	0.5467 ± 0.1017	0.1378	0.07506 ± 0.01664
	9	3	11	0.7 ± 0.09428	0.4343	0.01 ± 0.00163
	25	3	23	0.4933 ± 0.09832	0.1763	0.007833 ± 0.002131
	25	5	23	0.5667 ± 0.07817	0.346	0.00832 ± 0.00288
	49	7	47	0.02667 ± 0.01491	0.004229	$5.565\text{e-}6 \pm 7\text{e-}6$
WizDoom	8	/	8	0.89333 ± 0.059628	0.24171	0.23405 ± 0.014781
	8	/	14	0.78 ± 0.064979	0.16459	0.16733 ± 0.023117
	8	/	20	0.39333 ± 0.11643	0.086714	0.06898 ± 0.017788

Table 2: PAC bounds.



Paper



Blogpost



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