

Phase 10-11 Model Summary (All trained on 55k ALOHA frames)

Model	Purpose	Parameters	Training (55k)	Metric	Performance
RelationalGNN	Predicate Classification	203K	29 min	Accuracy	98.96%
ForwardDynamicsModel	Pre-Execution Simulation	259K	19 min*	Delta Error	1.7 mm
SpatiotemporalGNN	Temporal Stability	~400K	47 min	Accuracy	~90%

\* ForwardDynamics: 17 min pre-computation + 2.3 min training