Title: Scenario-Based Curriculum Generation for Autonomous Driving

Abstract: The automated generation of diverse and complextraining scenarios has been an important ingredient in manycomplex learning tasks. Especially in real-world applicationdomains, such as autonomous driving, auto-curriculum generation is considered vital for obtaining robust and generalpolicies. However, crafting traffic scenarios with multiple,heterogeneous agents is typically considered as a tedious andtime-consuming task, especially in more complex simulationenvironments. In our work, we introduce MATS-Gym, aMulti-Agent Traffic Scenario framework to train agents inCARLA, a high-fidelity driving simulator. MATS-Gym is amulti-agent training framework for autonomous driving thatuses partial scenario specifications to generate traffic scenarioswith variable numbers of agents. This paper unifies various existing approaches to traffic scenario description intoa single training framework and demonstrates how it canbe integrated with techniques from unsupervised environment design to automate the generation of adaptive auto-curricula.