Curriculum Reinforcement Learning

Goal Generation a

Marius Lindauer







Winter Term 2021

Automatic Goal Generation

- ▶ Let's assume that the task itself is fixed but the goal condition is flexible
 - For example, the goal position can change
 - lacktriangle That is, we define a set of states S^g that represent the goal

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- ▶ Let's assume that the task itself is fixed but the goal condition is flexible
 - For example, the goal position can change
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- ▶ Idea: Generate the set of goals adaptively based on the learning needs of the agent

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Example: GoalGAN Florensa et al. 2017

- Select which goals are of a currently appropriate difficulty
- Train a GAN to generate instances with that difficulty
- Train agent on those instances to improve
- ➤ You can see the results & generated images here

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Example: GoalGAN Florensa et al. 2017

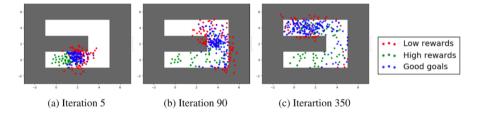


Figure: Example training progress

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