AI Planning

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STRIPS (Stanford Research Institute Problem Solver)

A new approach for problem solving developed in 1971 by “Richard E. Fikes ,Nils J. Nilsson”.
Using First order logic ⟨ P condition , O Operation , I Initial State , G Goal⟩,From the initial state there are a set of applicable Operations which transforms the state of the world to another state,The task of the problem solver is to find a sequence of operators which transform the given initial problem into one that satisfies the goal conditions.

Trying to control robot’s action from high level action to reach a high level goals.

Planning with heuristics

Heuristic planners based on ignoring negative effects have achieved extremely competitive runtime behavior on a lot of the commonly used benchmark planning domains. At the AIPS -2000 planning systems competition, four out of five awarded fully automatic planners were based on, or at least incorporating, that approach [Bacchus and Nau, 2001]. All of those planners use the same naive search paradigm, state space search. Their success is apparently due to the quality of their heuristics on many of the current planning benchmarks.

Planning Domain Definition Language

Inspired by STRIPS and ADL is an attempt to standardize Artificial Intelligence (AI) planning languages. It was first developed by Drew McDermott and his colleagues in 1998.The main contribution of PDDL is that it has enabled researchers to reuse and compare their work.this make a lot of development though this language easier than before . It allows us to define a goal, actions, conditions, and mutex, to enumerate over fluents to develop plans for reaching the goal.and used in many other projects for implementation.

https://towardsdatascience.com/ai-planning-historical-developments-edcd9f24c991

http://ai.stanford.edu/~nilsson/OnlinePubs-Nils/PublishedPapers/strips.pdf
https://en.wikipedia.org/wiki/STRIPS
http://www.cs.toronto.edu/~sheila/2542/w06/readings/RintanenHoffmann01.pdf
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