Week 8

2019年6月21日 11:17

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Logical plan

- use logic to model the world and agent reasoning
- (many!) different kinds of logic
  - → propositional
  - → quantified
  - → Model
  - → temporal.

Believe (P)

BP

P → BP

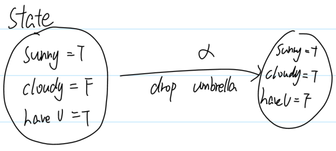
BP → P

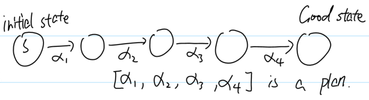
P ∧ B¬P

AI Planning

logic + search

State





Robotics
STRIPS
Shakey the Robot

[α1, α2, α3, α4] is a plan.

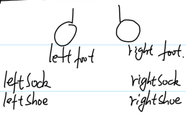
α4(α3(α2(α1(S)))) = Goal State [Shorter plans are better optimal plans]

Making Tea

- Put Water in kettle
- heat the kettle until water boils
- get a cup
- pour Water into cup
  - ↳ from kettle
- get tea bag
- leave tea in Water for some time
- add milk ← ask if cream is ok to get milk
- add sugar
- mix the tea
- Serve the tea

Getting Dressed

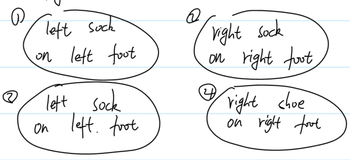
6 objects



actions

Put on sock/shoe on left/right foot

Goal: leftSock on left foot
leftshoe on left sock
right sock on right foot
left sock on right foot
right shoe on right sock

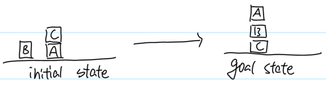


exact order doesn't always matter

Some actions can be done in parallel

undoable actions

Blocks World (etaoin shrdlu)



Dialog

Cust: Can you tell me where I can find the bread?

Emp: It's in aisle 2.

Cust: Thanks

Speech act theory