




Artificial Intelligence Programming

Intro to Knowledge Representation

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Introduction

- So far, we've talked about search, which is a means of considering alternative possibilities.
 - The way in which problem states were represented was typically pretty straightforward.
- The other aspect of many AI problems involves representing possible states.
- Our choice of representation influences:
 - The problems our agent is able to solve.
 - The sorts of environments an agent can deal with.
 - The complexity of search
 - The sophistication of our agent.

Knowledge Representation

- Choices we'll look at include:
 - Logic-based approaches
 - Propositional logic
 - First-order logic
 - Ontologies
 - Logic is a flexible, well-understood, powerful, versatile way to represent knowledge.
 - Often fits with the way human experts describe their world
 - Facts are either true or false
 - Has a hard time dealing with uncertainty.