AGENTS

How do you design an intelligent agent?

Intelligent agents perceive environment via sensors and act rationally on them with their effectors

What are rational agents?

Ideal rational agents should, for each input, act to maximize expected performance measure based on

Agent types:

Properties of Environments: Describe the properties of a given problem space

Represent problem as state, action

Search Strategies:

– Uninformed

– Informed

Properties of Searching Strategies

Cost of path found

Heuristics

Hill Climbing

CONSTRAINTS

Problem as Constraint Network

CSP strategies:

– Backtracking

– Forward Checking

– Arc Consistency

– Most constraining variable

– Least constraining value

Also:

– Splitting

– Variable Elimination

– Local Search

Pay attention to how these strategies work

Map Coloring Example

LOGIC

Remember:

– Knowledge base

– Entail

– Model

– Soundness/Completeness

Propositional Logic:

– Syntax

– Rules of Inference

– Resolution by Refutation

FOL:

– Syntax

– Translating English to FOL