AI Notes 9/21/16

Informed A\* Search

* Uses h(A) that estimates the cost to goal
* Orders fringe by h(A)
* Add depth to heuristic estimate

A\*

* Sorts the fringe by f(A) = c(A) + h(A), c9A) = real cost of A, h(A) = estimate to goal

Theorem

* A\* is optimal (finds a smallest + cost goal state)
* If \* keeps whole fringe
* If h(A) <= true cost to the goal, is admissible

Proof

* Claim: f(B) < f(A)
* Proof: f(A) = c(A) + h(A) = c(A) + 0
* F(B) = c(B) + h(B) <= c(G) < f(A)

Manhattan Distance cannot include blank

A\* can use 2^n space

* IDA\* - A\* in a loop for maximum depth/cost, keep incrementing
* Space bounded – give yourself max number of nodes willing to keep, throw away stuff when its full. Maybe throw oldest, expensive. No optimality guarantee

9/26/16

Default Parameters

Tuples

print(“This circle: %5s %10s %10.3f” %(fc, bc, c1.radius))

(a,b,c,\*rest)