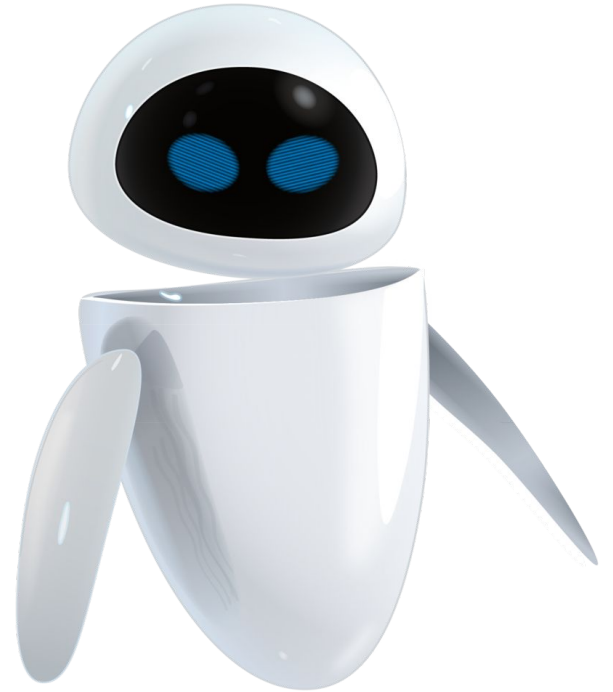

Stochastic Shortest Path in Maze

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CB.EN.P2AIE22009 CB.EN.P2AIE22007

Path Finding

Given a maze and an agent, find the shortest route which will lead the agent to the exit/ goal



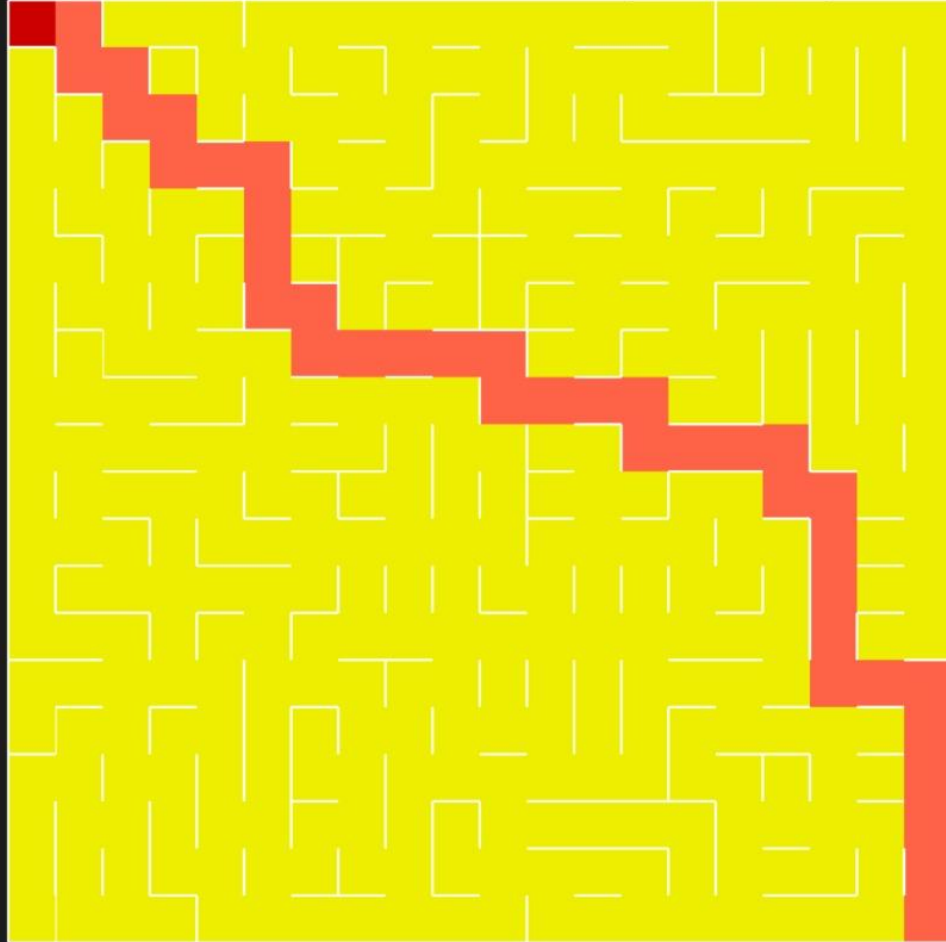
—

Search

Explore everything!

Breadth-First Search (BFS) :

No. of visited cell : 399



—

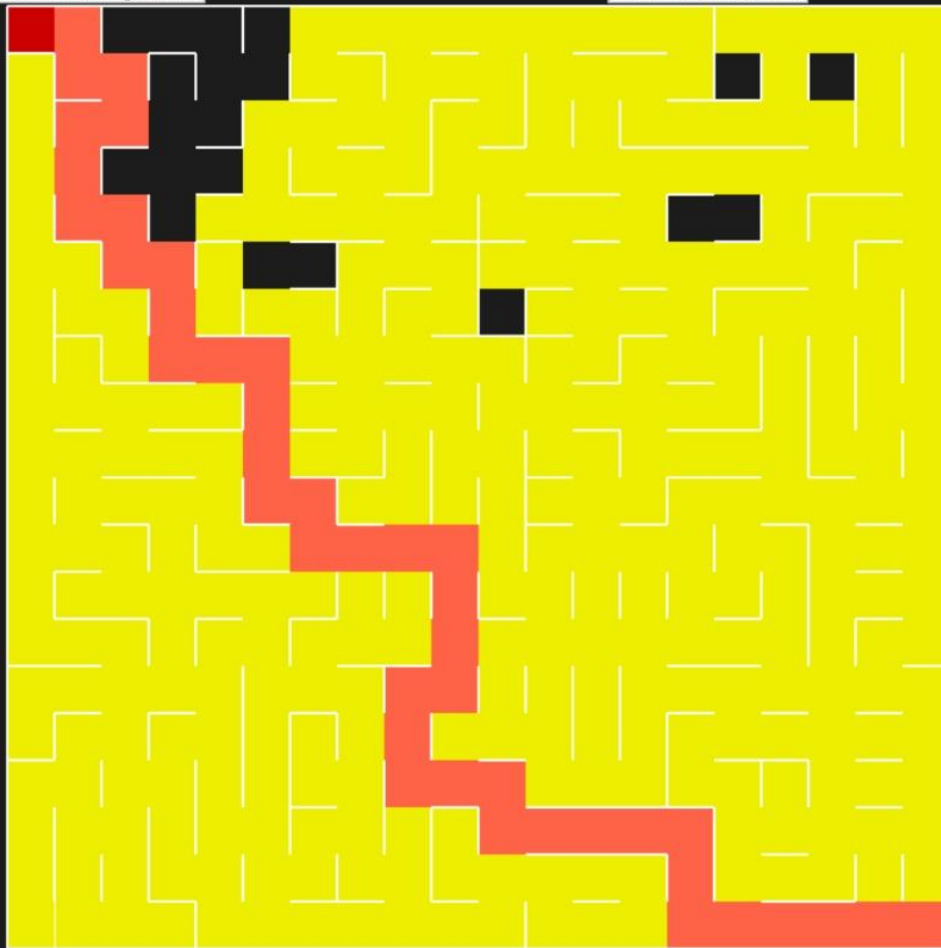
Search

Explore everything!

Is it Smart?

Random Walk Algorithm :

No. of visited cell : 379



—

Heuristics

Don't just guess !

—

Heuristics

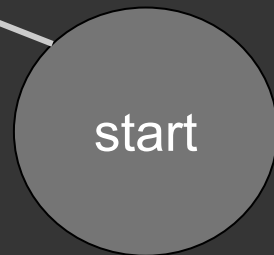
Don't just guess !

Make it Count

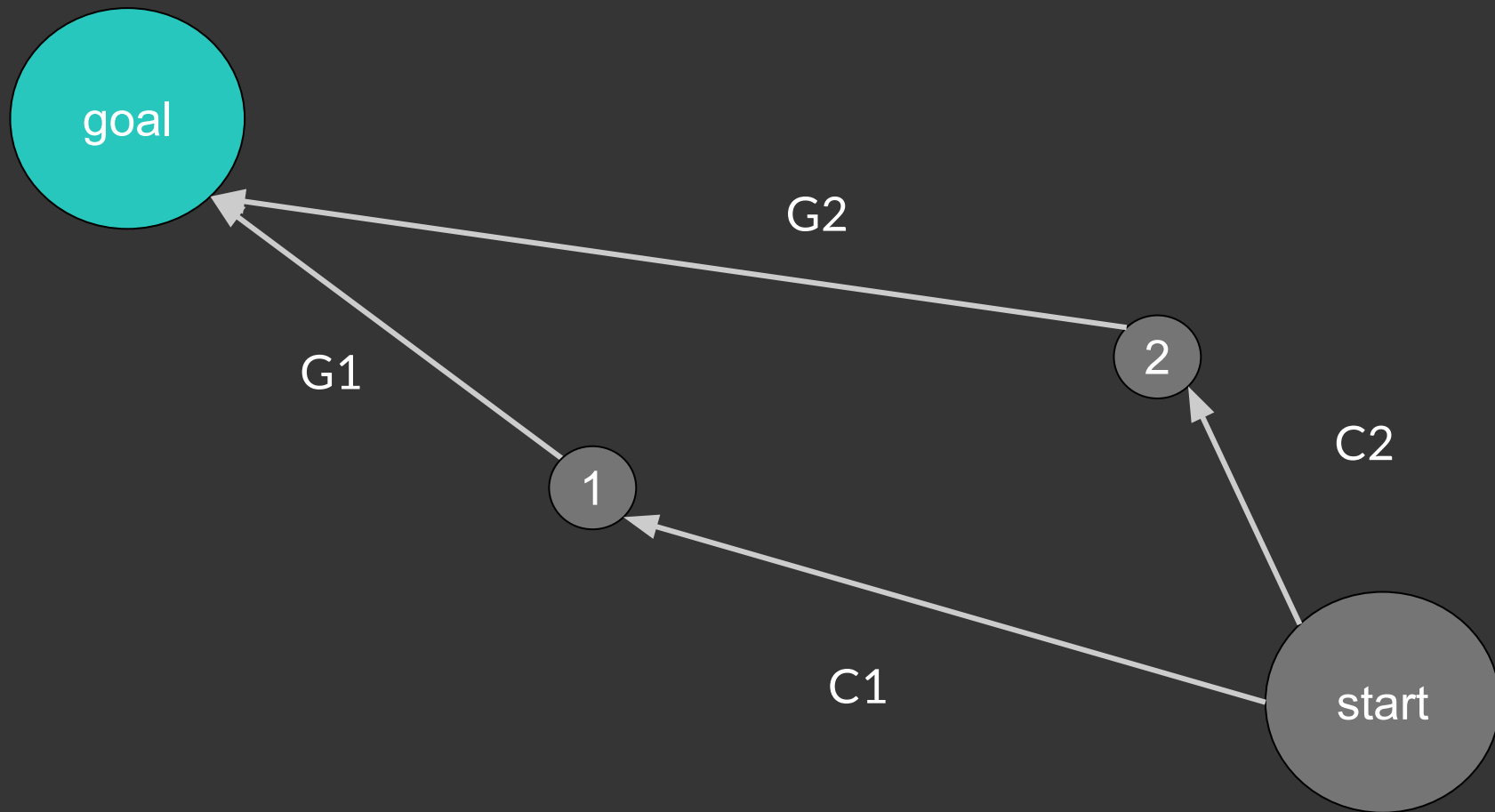
—



distance



—



—
A*

BB + Best First

Make a move but remember the history!

—
A *

$$F(n) = g(n) + h(n)$$

Make your moves count !

—

Where is the stochasticity?

—

Where is the stochasticity?
Randomness?

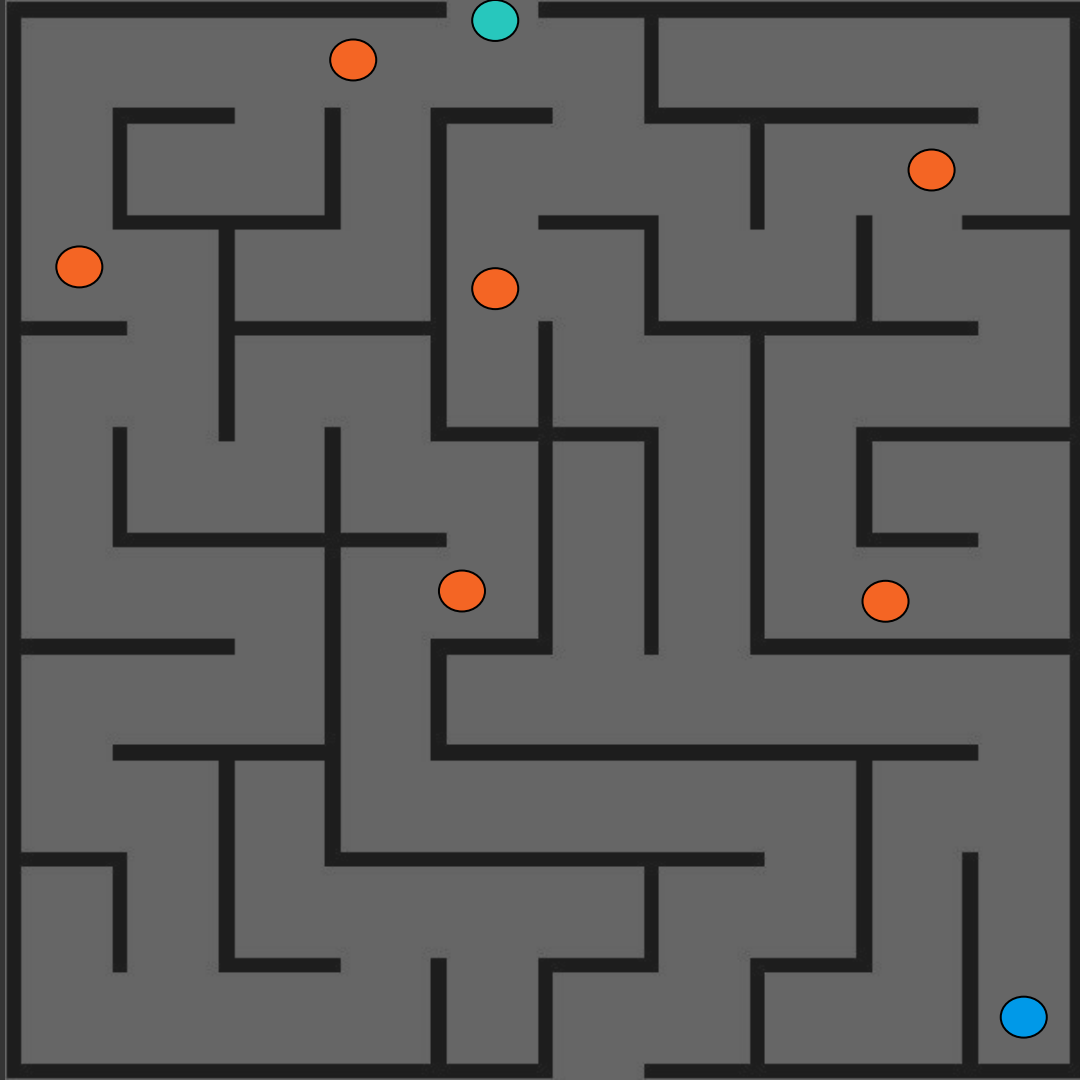
—

Where is the stochasticity?

Randomness?

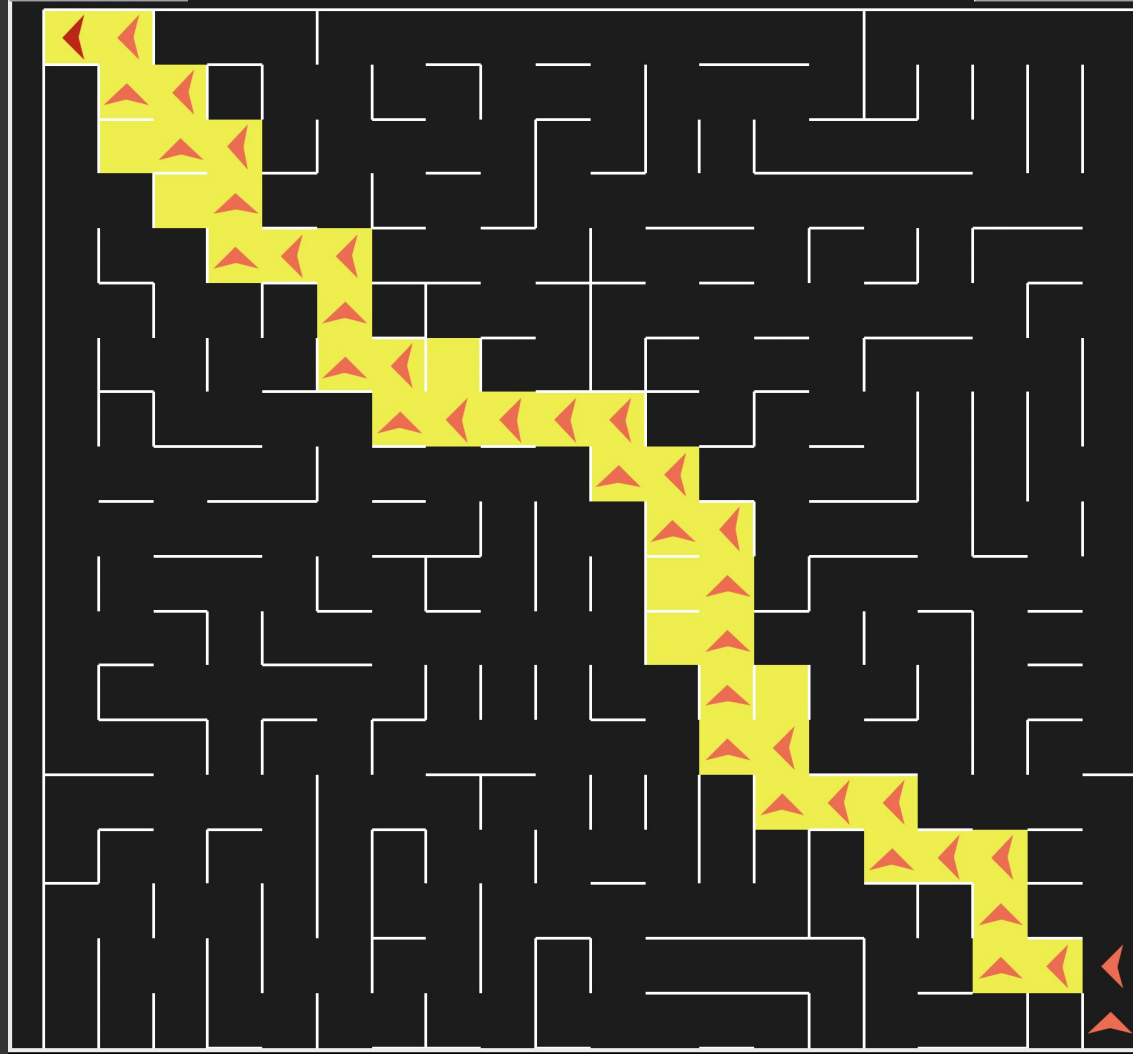
Uncertainty?

—



No. of visited cells : 43

A Star Stoch Path Length : 39

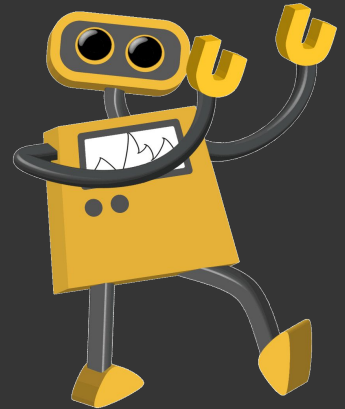


—
So clearly

Path length and

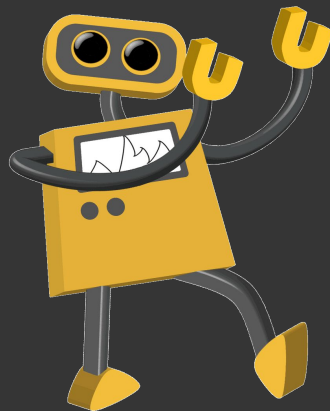
No. of Visited cells of A^* is the

Least



—

So Stochasticity adds a bit of
Asymmetry which is actually
Helpful



Thank You

