



This brings us to the idea of an **Objective** function

$$J(\text{path}) = \text{sum of costs}$$

What is a simple cost we can minimize?

$$J(\text{path}) = \text{total distance traveled}$$

Realistically, we can't evaluate every path...
but we can rule out bad ones

How can we guess how (un)favorable an
intermediate position is?

We can use a heuristic:

$$H(\text{position}) = \text{Euclidean distance to the goal}$$