**About this Lesson**

This lesson is taught by Sebastian Thrun (Udacity's former CEO) and comes from one of Udacity's first courses. The production style is a little different than what you may be used to but the content is very good.

This lesson covers **discrete** path planning and in the last lesson you will learn about **continuous** path planning. Even though the real world is continuous, there are many situations where *discretizing* the world makes it easier and computationally faster to solve path planning problems.

In addition to the practical benefits of these algorithms, it's also conceptually useful to learn about them because they deal with some of the same concepts that we will keep coming back to in this lesson. Those concepts include:

* **Cost functions** and how to include human insights (like "it's easier to make right turns than left turns") into our planning algorithms.
* **Optimality** and the tradeoffs associated with finding *the best* solution vs finding a solution that is *good enough*.
* **Online vs Offline algorithms** and how we can avoid complex computation on the road by precomputing best paths whenever possible.