**Demo: Reinforcement Learning with AWS DeepRacer**

**Important**

* To get you started with AWS DeepRacer, you receive **10 free hours to train or evaluate models and 5GB of free storage during your first month**. **This offer is valid for 30 days after you have used the service for the first time.** Beyond 10 hours of training and evaluation, you pay for training, evaluating, and storing your machine learning models. Please read the [AWS account requirements](https://classroom.udacity.com/nanodegrees/nd065/parts/a5a4c41f-9cc7-48bd-9f00-582f35a7da53/modules/885b116b-2ca3-453a-8df1-4ea4b436b5da/lessons/8b79bd0c-6a77-40bc-8f96-b669c36d6103/concepts/2e2fcd70-fd26-45aa-9745-5fe947e8a3d9?contentVersion=1.0.0&contentLocale=en-us) page for more information.

**Demo Part 1: Create your car**

Click [here](https://console.aws.amazon.com/deepracer/home?region=us-east-1#getStarted) to go to the AWS DeepRacer console.

**Summary**

This demonstration introduces you to the [AWS DeepRacer console](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#getStarted) and walks you through how to use it to build your first [reinforcement learning model](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#createModel). You'll use your knowledge of [basic reinforcement learning concepts and terminology](https://docs.aws.amazon.com/deepracer/latest/developerguide/deepracer-basic-concept.html?utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course) to make choices about your model. In addition, you'll learn about the following features of the AWS DeepRacer service:

* [**Pro and Open Leagues**](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#league)
* [**Digital rewards**](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#racerProfile)
* [**Racer profile**](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#racerProfile)
* [**Garage**](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#garage)
* [**Sensor configuration**](https://docs.aws.amazon.com/deepracer/latest/developerguide/deepracer-choose-race-type.html?utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course)
* [**Race types**](https://docs.aws.amazon.com/deepracer/latest/developerguide/deepracer-choose-race-type.html?utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course)
  + **Time trial**
  + **Object avoidance**
  + **Head-to-head**

**Demo Part 2: Train your car**

This demonstration walks you through the [**training**](https://docs.aws.amazon.com/deepracer/latest/developerguide/deepracer-console-train-evaluate-models.html?utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course) process in the [**AWS DeepRacer console**](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#getStarted). You've learned about:

* The **reward graph**
* The **training video**

**Demo Part 3: Testing your car**

**Summary**

This demonstration walks the [**evaluation**](https://docs.aws.amazon.com/deepracer/latest/developerguide/deepracer-console-train-evaluate-models.html) process in the [**AWS DeepRacer console**](https://console.aws.amazon.com/deepracer/home?region=us-east-1&utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course#getStarted).

Once you've created a successful model, you'll learn how to enter it into a race for the chance to win awards, prizes, and the opportunity to compete in the worldwide [**AWS DeepRacer Championship**](https://aws.amazon.com/deepracer/league/?utm_source=Udacity&utm_medium=Webpage&utm_campaign=Udacity%20AWS%20ML%20Foundations%20Course).