

# Storyboarding and Scripting Guide

Subject: AI Book	Page: 38 to 42
Chapter: 4	Concept: Reinforcement Learning

Scene	Narration	On-Screen
1	<p><b>Hello there! Well done for coming this far.</b></p> <p>We've previously learned about <b>Machine Learning</b>- a process by which a machine learns from a pattern and adapts accordingly.</p> <p>And we have also learned <b>Deep Learning</b> - a special type of Machine Learning that works on images and videos.</p> <p>In this video, we will be looking at another form of learning called <b>Reinforcement Learning</b>.</p> <p>Let's get started!</p>	<p><b>Dodo welcomes the students and shares a road map on the journey so far.</b></p> <p><b>Show Dodo presenting a recap of a screenshot of the definition of machine learning and deep learning</b></p> <p><b>Insert a robot sound</b> <a href="https://soundbible.com/524-R2D2-Again.html"><u>https://soundbible.com/524-R2D2-Again.html</u></a></p> <p><b>Reinforcement learning</b> should be displayed on the screen as the corresponding VO reads.</p> <p>Show Let's get started!</p>

2	<p><b>Let's start by defining what Reinforcement Learning is.</b></p> <p>Reinforcement Learning is the process by which machines achieve a set goal by trial and error.</p> <p>When the goal is achieved, the Machine is rewarded and when it fails, it is punished by making it attempt the task again. Did you understand what I just said?</p>	<p><b>Display Reinforcement Learning as a heading</b></p> <p><b>Display both the definition of RL and the illustration of a robot undergoing training on the screen.</b> <a href="https://www.freepik.com/free-vector/military-robotics-abstract-concept-illustration_11668778.htm#page=1&amp;query=machine%20learning&amp;position=41&amp;from_view=search">https://www.freepik.com/free-vector/military-robotics-abstract-concept-illustration_11668778.htm#page=1&amp;query=machine%20learning&amp;position=41&amp;from_view=search</a></p>
3	<p><b>For better understanding, let me explain.</b></p> <p>I will start by taking you back to when we were very young and we were learning how to walk, we fell every time we attempted to walk. Weren't we?</p> <p>Yes, we were. After several trials and falls, we learned that holding on to furniture, walls, or adults helped us to walk.</p> <p>Each time we fell, we sustained injuries. However, when we did not fall, we got an applause or a candy.</p>	<p><b>On an AI interface show text on the screen.</b></p> <p><b>Create illustrations of the various stages it takes for a child to walk.</b></p> <ul style="list-style-type: none"> <li>1. Sitting,</li> <li>2. Crawling</li> <li>3. Standing with the support of furniture,</li> <li>4. Walking with the support of an adult or walls.</li> </ul> <p><b>Show an illustration of the child standing in a living room receiving a lollipop from his/her dad and an applause from the mum</b></p> <p><a href="https://www.freepik.com/premium-vector/little-boy-takes-first-step-holding-wall-one-series-similar-images_18735513.htm#page=1&amp;query=a%20babys%20first%20steps&amp;position=35&amp;from_view=search">https://www.freepik.com/premium-vector/little-boy-takes-first-step-holding-wall-one-series-similar-images_18735513.htm#page=1&amp;query=a%20babys%20first%20steps&amp;position=35&amp;from_view=search</a></p>

4	<p>A similar instance is when we take a test, and the teacher punishes us by awarding zero marks to the questions we fail their answers and full marks to the answers we get right.</p> <p>When we learn from our wrong answers and do what is right, we get rewarded with full marks. This is the same way AI can learn through reinforcement learning.</p>	<p><b>Show an illustration of a child with two expressions of when he/she got good and bad grades.</b></p> <p><a href="https://www.freepik.com/premium-vector/little-girl-with-different-expression-when-she-got-bad-good-grades_18985517.htm#page=1&amp;query=failed%20school%20test&amp;position=1&amp;from_view=search">https://www.freepik.com/premium-vector/little-girl-with-different-expression-when-she-got-bad-good-grades_18985517.htm#page=1&amp;query=failed%20school%20test&amp;position=1&amp;from_view=search</a></p>
5.	<p><b>Let's now relate all of these to the world of AI.</b></p> <p>Reinforcement learning (RL) involves an AI computer or machine that is given a goal.</p> <p>Whenever the machine fails to make progress, it must start again.</p> <p>However, if it makes good progress towards achieving its goal, it is rewarded.</p> <p>The AI tries all means possible until it achieves its goal.</p>	<p><b>Show Dodo saying the text in bold</b></p> <p>In a flow, show <b>an image of an AI machine, next to it a progress bar that leads to a goal icon.</b></p> <p><b>Animate the illustration below:</b> when the machine fails a red X appears between the machine and the goal icon.</p> <p>When the progress bar is complete the goal icon glows green and has a check sign above it.</p> <p>Show a smiley emoji above the AI machine to indicate that its happy it achieved its goal</p>
6.	<p>Every day, we all learn from our mistakes. We pick the lessons and they make us better because we don't make the same mistakes again. This is the secret of Reinforcement Learning. It works by not quitting after many failures.</p>	<p><b>Show a recap of any of the scenes above to help illustrate how reinforcement learning works.</b></p> <p>Indicate at the bottom of it in bold "<b>It works by not quitting after many failures</b>" should be written</p>

**Note to VOA:**

- ... Sound animated and fun e.g. like you are telling a story of how cool AI is.

**Note to developer:**

- The instructor “Dodo” should be used as the guide throughout the course.
- All icons used to represent bullet points should be labeled.

**THE END**