



Language



120 min

Educator's  
Guide

# AI Roleplaying



**Summary:** Role-playing is a good technique to use for teaching languages, especially in communication. With advancement in technology, it is now possible to use role-playing to teach creative writing or through game-based learning.

## Key Concepts

Role Playing  
Natural Language  
Processing

## Software

AI Dungeon

## Instructional Objectives

Learners will be able to:

1. Apply creative writing to role-play a character in an AI (Artificial Intelligence) role-playing game
2. Integrate the use of AI in AI Dungeon to create an interesting story

## Learning Outcomes

- Demonstrate the ability to make a role more immersive by writing creatively
- Make use of AI in AI Dungeon to create an interesting story

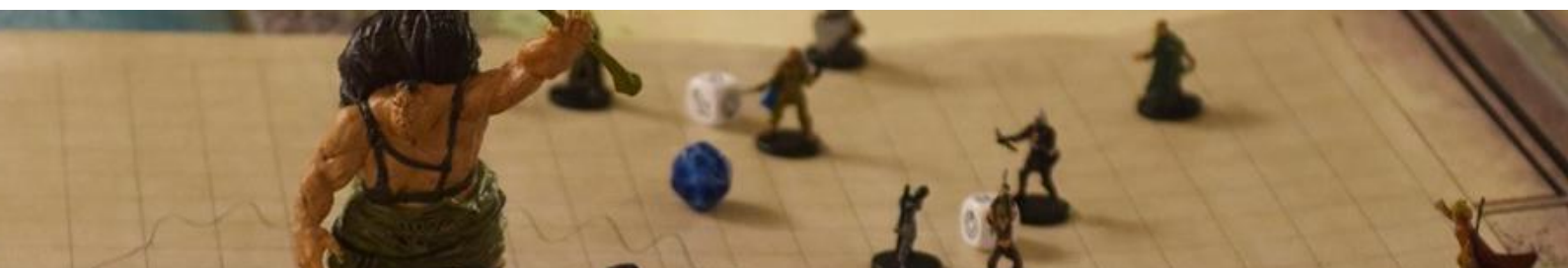
## Real World Application

Develop an understanding of AI and its applications in simulating realistic human responses.

# AI Role-playing

## 1. Lesson Overview

	Activity	Innovation Skill
<b>Introduction</b> (15 min)	Discussion on ability of AI in playing the role of a human.	
<b>Slides 1 – 3</b>	Introduction to role-playing and its uses in stories.	
<b>Development</b> (90 min)	Introduction to AI Dungeon.	AI & Machine Learning (Natural Language Processing)
<b>Slides 4 – 15</b>	Apply knowledge of role-playing and AI to write a story in AI Dungeon	Computational Thinking (Algorithms)  AI & Machine Learning (Natural Language Processing)
<b>Conclusion</b> (15 min)	Reflection on how to improve the AI program created by learners.	
<b>Slides 16 – 18</b>		



# AI Role-playing

## 2. Session Preparation

### Logistics

#### Items

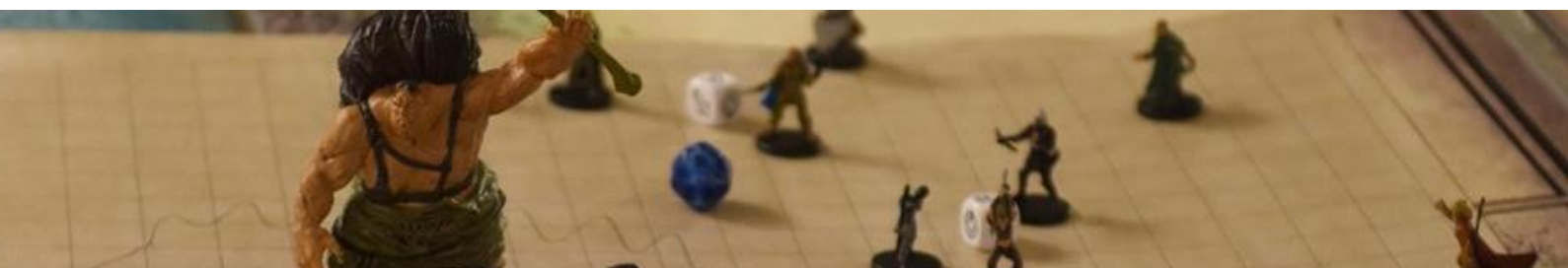
Laptop, Desktop or Chromebook (Recommended: 2 learners per laptop)

OPTIONAL: Online Collaborative Platform (e.g, Padlet.)

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### Installation

1. Go to <https://play.aidungeon.io/> to play.
2. Go to settings and ensure that the Safe mode has been set to "STRICT". To go to settings, you can click on 3 bars at the top left corner of the home page .
3. Other things to note:
  - For hardware requirements, please refer to the minimum hardware requirements from the software provider.
  - The minimum requirement to use AI Dungeon effectively is 16 GB RAM. Tests show that the average time of response is 30 secs. Higher RAM will lead to shorter response times for the AI.
  - The AI in AI Dungeon can be unpredictable at initial input. Take note that the AI when starting can give strong responses as output (i.e. killing the player instantly resulting in a game over, make sudden changes/mood of the story). Once player input is placed on the first several responses, the AI will adapt to player input.
  - The AI can be quite inconsistent sometimes due to long input. Using 'revert' helps to return to the previous response, or restarting the game will refresh the AI.

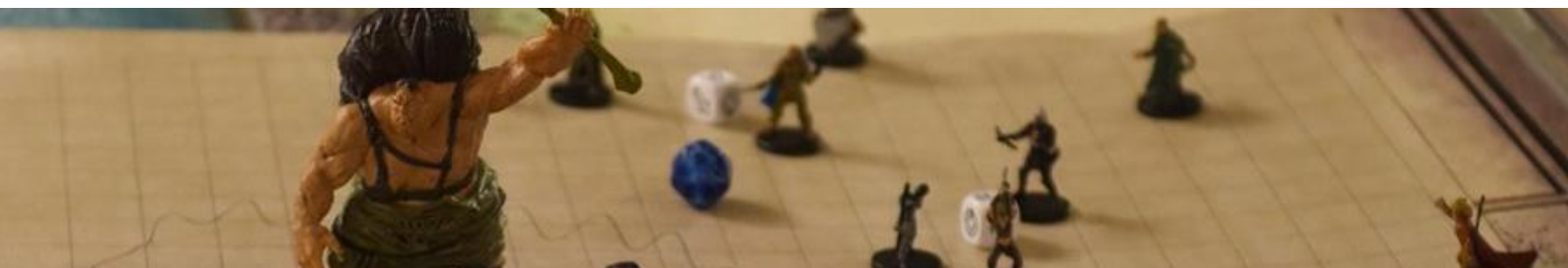


# AI Role-playing

## 3. Activity Guide

### Introduction (slides 1 – 3)

Duration	Slide	Activity
15 min	1	Introduction to lesson.
	2	Overview of the lesson.
	3	<p>Begin the lesson by asking learners to reflect on this essential question:</p> <ul style="list-style-type: none"><li>▪ Can AI role-play as a human?</li><li>▪ What is role-playing? What can AI do?</li><li>▪ Can AI perform with the same level of intelligence?</li></ul> <p>Engage learners in a discussion.</p> <p>Expected responses may include AI is smarter than a human as it can do computations faster however it cannot build human relationships.</p>



# AI Role-playing

## 3. Activity Guide

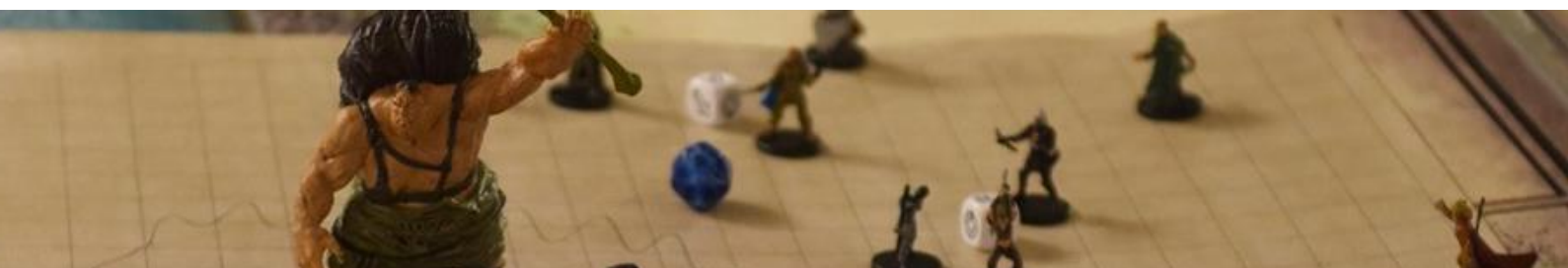
### Development (slides 4 – 15)

Duration	Slide	Activity
Activity 1 15 min	4	Introduce learners to the concept of role-playing. Role-playing is acting or playing the part of a person or character in a given scenario.
	5	<p>Role-playing (Source: <a href="https://youtu.be/aJCEQaSivHE">https://youtu.be/aJCEQaSivHE</a>) can be a method of teaching communication or language. Role-playing is a good storytelling tool. When we watch theater or movies, we are watching stories come to life. Likewise, role-playing takes place in gaming.</p> <p>Use the video to extend the discussion of the characteristics of role-playing.</p>
Activity 2 15 min	6 - 7	Introduce AI Dungeon and its function.
	8	<p>Explain what an AI Dungeon gameplay looks like. AI in AI Dungeon has analyzed hundreds or thousands of books to learn the rules and concepts of writing books. It also learns from players who play the game and key in different storylines.</p> <p>Using what it has learned, it responds with a storyline according to what it has learned when a player keys in a storyline.</p>
	9 - 10	<p>This video (Source: <a href="https://youtu.be/kopoLzvh5jY">https://youtu.be/kopoLzvh5jY</a>) shows an example of how AI has improved over the years through a video game. The AI in this game, like AI Dungeon, learns from millions of inputs from each game to create a realistic and believable response. Through various input, the AI adapts to the situation and attempts to find the best way to respond.</p>



Mindset: Computational Thinking | Algorithms

Learners construct and follow a series of steps or instructions to systematically and logically solve complex problems.



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## 3. Activity Guide

### Development (slides 4 – 15)

Duration	Slide	Activity
<b>Activity 3</b> 15 min	11	Learners will start AI Dungeon. Go to <a href="https://play.aidungeon.io/">https://play.aidungeon.io/</a> to start playing.
	12	Go through the commands in the slide.
	13	Practice playing AI Dungeon with 10 inputs. Encourage learners to be as detailed as possible.
<b>Activity 4</b> 45 min	14 - 15	Learners will now write a story with given conditions and proceed to create the role-play using AI Dungeon.

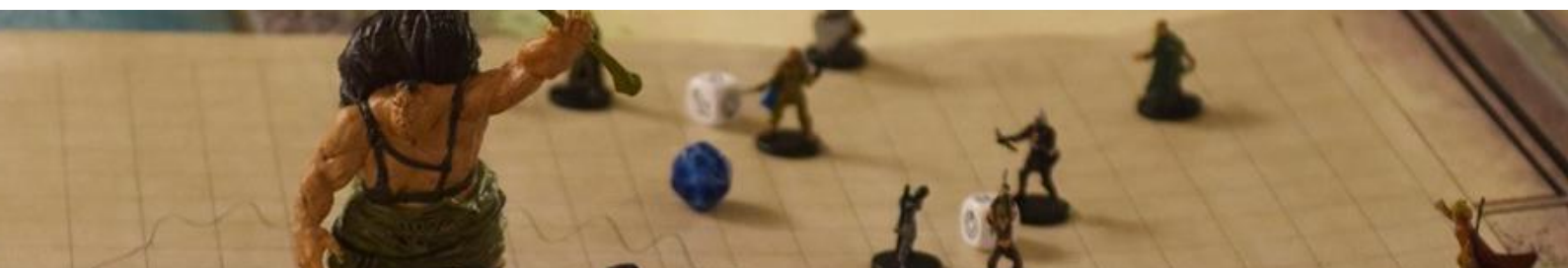


Educators can select the theme for the story.



Skillset: AI & Machine Learning | Natural Language Processing

Learners program computers to automatically read, understand and derive meaning from natural human language in speech or text.

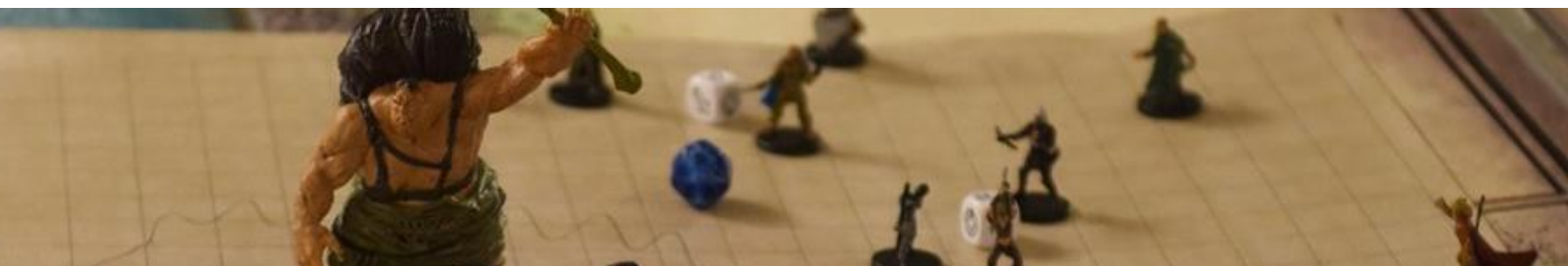


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## 3. Activity Guide

### Conclusion (slides 16 – 18)

Duration	Slide	Activity
15 min	16	<p>Learners will share their thoughts on what they have learned in today's lesson through an online tool such as Padlet. Learners will share their thoughts based on these reflection questions.</p> <p>Reflection Questions:</p> <ol style="list-style-type: none"><li>1. Did you manage to complete your story? What would help to complete your story or make it better?</li><li>2. How did you find the AI responses? Was it unrealistic or human like? Why?</li></ol> <p>Educator can select 2 – 3 responses to share with the class.</p>
	17	Educator will conclude this lesson by going through a summary of the lesson.
	18	End slide.

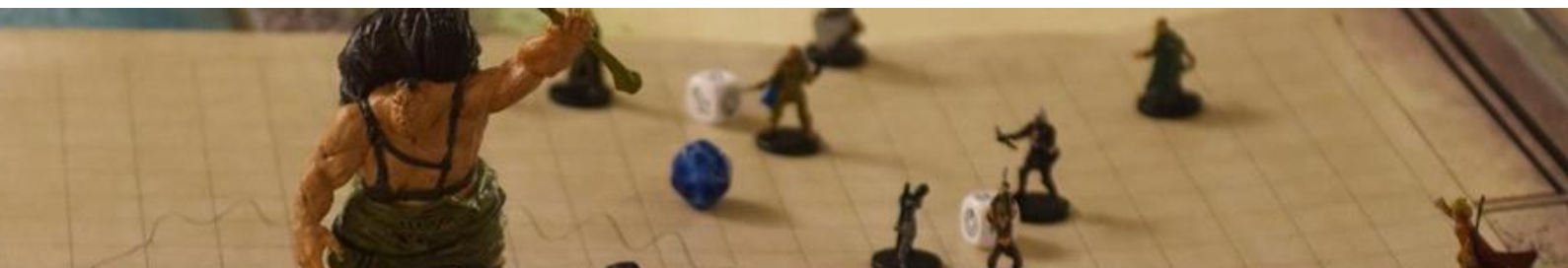


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## 4. Troubleshooting Tips



### Common Mistakes & Issues

	Issue	Possible Reasons	Resolution
1	AI Dungeon could not start at the main menu.	Incorrect instructions were input.	Ensure that learners follow the correct instructions when running AI Dungeon.
2	AI does not comply with the learner input, or gives a completely different response.	AI does not recognize input or input does not compute.	Check the spelling & the wording of the learner input.
3	Learner did not achieve the desired AI response.	Learner gave an input that was different from their previous iteration.	Type 'help' to check the list of commands to use, or 'revert' to go back to the previous response.



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## 5. Assessment Rubric

Focus	Learning Outcome	Approaching Expectation	Meeting Expectation	Exceeding Expectation
 <p>Computational Thinking (Algorithms)</p>	Write a storyline that follows rules and techniques of good writing.	Storylines are simple and do not contain enough details.	Storylines attempt to describe characters and scenarios.	Storylines contain elements of detailed description and creative writing.
 <p>AI &amp; Machine Learning (Natural Language Processing)</p>	Create a story that integrates use of natural language processing based on user input.	One or less conditions met in story.	Two or more conditions met in story.	All conditions met in story.

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