­

Imagine Cup Junior

**Lesson Three - What is generative AI? Introduction**

Welcome to Lesson Three of Imagine Cup Junior for Beginners! The goals of this lesson are for your students to:

* + Understand what generative AI is and how it is different than traditional or rule-based AI
  + Distinguish between traditional or rule-based AI and generative AI in real-world examples based on their characteristics and functions.

In this educator overview of Lesson Three, we will again talk through how this lesson works, the PowerPoint slides that you can use, and some extra activities your students can go deeper with if they are curious to learn more. Remember, you can run all six lessons in one day, in the form of a sprint hackathon, or you can schedule them across several weeks or months.

We have a few different types of activities in each lesson. These include:

Rapid Reflection: A chance for your students to reflect on key questions to help guide their learning.

Sprints: These are short periods where your students need to work to the timer and try to achieve the goals listed on the slide.    
Challenge Check-ins: This is a chance for your students to recap what they have done and think about anything they may want to get done before the next lesson.

Submission Tips: We often include tips to help your students maximize their points through their submissions.

Bonus Activities: If you would like to explore the concepts of this lesson further with your students, we also include bonus activities.

Let’s get started!

**Lesson Notes**

**Slide 1:** This is a title slide that you can have up at the beginning of Lesson Three of Imagine Cup Junior.

**Slide 2:**Challenge Check-in. This slide is a check-in to recap what the students have learned so far and what is coming next!

**Slide 3:**This slide is a visual overview for the students of what they will be doing in Imagine Cup Junior. This is to show them that there are three more lessons after this one, but that the focus of today’s lesson is to learn about Generative Artificial Intelligence (aka Generative AI or genAI).

At this point, you should be around 5:00 minutes into your 45:00-minute lesson.

**Slide 4:**Submission tips **–** This is a quick reminder to tell your students this challenge is all about using AI in powerful ways. Students must ensure their concept is actually AI and leverages APIs. They must also explain what kind of AI their concept is- either traditional or generative.

**Slide 5:**Rapid Reflection **–** To engage your students with this lesson, ask them to work together in their teams or as a whole class to come up with 3 to 5 things they remember from the last lesson about AI. Some guiding questions to help are provided on the slide.

**Slide 6-8:**Recap from Lesson 2- Here you will provide the definition of Artificial Intelligence, the cognitive services and APIs that sit under each, and review the three steps of how AI works.

At this point, you should be around 10:00 minutes into your 45:00-minute lesson.

**Slide 9:**Types of AI- This is when students are introduced to the idea of General AI and Specific AI.

* **General AI –** doesn’t exist yet but would be capable of performing any task that a human could do and would have similar cognitive abilities. It would be able to reason, solve problems, learn from experiences, understand natural language, and adapt to situations and contexts.
* **Specific AI (aka Narrow AI)**- is designed and trained for a particular kind of task or a limited range of tasks. It excels in performing predefined tasks but does not have human-like abilities beyond it’s intended scope. For example, a chatbot responds like a human in the language it generates, but only because it has been trained to do so, not because it is “thinking” on its own and has cognitive abilities. Within this type of AI exists two different kinds we’re focusing on in ICJ: traditional or rule-based AI and generative AI.

**Slides 10-11:**Traditional Rule-Based AI and Generative AI-This slide walks through the difference between the two kinds of AI. Both are a “specific/narrow” AI but are different in many ways such as their training, flexibility, and creativity. Examples are provided for each and it will be important to walk through each example and explanation to prepare them for their first sprint coming up next.

**Slide 12:** Sprint One – In the first ten-minute sprint of Lesson Three your students can work in their teams to go online to research and identify one example of each type of AI (traditional AI and generative AI) and explain how they could tell the kind of AI used in each concept.

**Slide 13:** Rapid Reflection - this is a chance for your class to debrief the sprint with a brief reflection on what was difficult and what was helpful when they were determining the type of AI in examples they found.

At this point, you should be around 30:00 minutes into your 45:00-minute lesson.

**Slide 14:** Submission tips – this reminds teams that they must explain the type of AI used in their concept as part of their submission.

**Slide 15:** Sprint Two - In the previous lesson, teams tried to build an AI concept to improve the lives of elderly people. Now, teams will revisit that concept to practice their ability to explain the APIs under Microsoft Cognitive Services that might be leveraged and explain the type of AI that is used in their concept based on their new understanding of traditional rule-based AI and generative AI.

**Slide 16:** Challenge Check-in. This slide is a check-in to recap what the students have learned so far and what is coming next!

**Slide 17:** Bonus Activity - If you want to learn more about generative AI, check out Future Tools where you can explore different AI tools for things like music and art generation.

**Slide 18:** Judging Rubric - This is the rubric used by the judges to assess your student’s submissions. You can share this with your class and use it to guide their AI concepts as they fill out their PowerPoint Submission Template.

**Conclusion**

Lesson Three done! As you can see, this PowerPoint slide deck is set up to step your students through Imagine Cup Junior in a really simple way, and to help them learn about AI and invent a great idea to submit. This lesson provided a deeper dive into the types and kinds of AI and prepared them to use their understanding to further explain their own concept.

Great work running Lesson Three and have fun preparing for Lesson Four where your students will invent their AI concept!