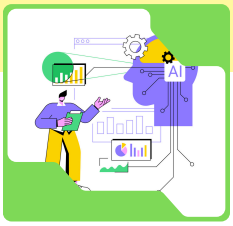
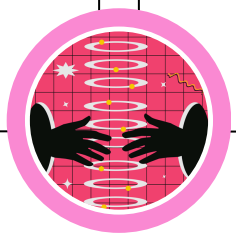


Illusion is all that matters

AI exploration phase

P2 - Building Hypothesis on AI

AI and Exploration Topics. What are we exploring?	**Materials Needed and to Create.** What must be prepared before the activity?
The **Illusion of Thinking**: what an AI really does **SDGs**: Sustainable Development Goals Reinforcement Learning explanation **Project kick off**: presenting the project, focusing on ideas	Analisys sheets (paper or digital) – *"The Illusion of thinking Analisys Sheet"* Pens / tablets / smartphones for note-taking Whiteboard or projector for collective analysis



Exploration Steps and Description. What do participants actually do?

Step 1 – The Illusion of Thinking (Classroom – 60 minutes):
Key Question: Does a machine actually "think," or is it just a very good mirror?

Suggested Facilitation Approach: Distribute the paper "**The Illusion of Thinking**." Before reading, ask students if they believe a computer can "understand" a joke or a sad story. Use the **Analysis Sheet** to guide their reading.

Activity Breakdown:

- **Individual Reading (20 min)**: Students read the paper, marking sections that surprise them.
- **Analysis & Conclusion (30 min)**: Using the The_Illusion_of_thinking-Analysis_Sheet, students must identify:
  - The "**Magic Trick**": How the AI mimics human reasoning.
  - The **Gap**: What is missing from the AI's "thought" process (e.g., consciousness, true intent).
- **Class Discussion (10 min)**: Share conclusions.

Fundamental Clarification: Processing language is not the same as possessing consciousness.

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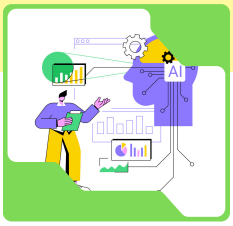

Illusion is all that matters

Exploration Steps and Description. What do participants actually do?

Step 2 – Robots for Good: Intro to SDGs (Classroom – 30 minutes)
Key Question: How can we use "thinking" machines to solve "unsolvable" global problems?

Non-Technical Explanation of SDGs: The Sustainable Development Goals (SDGs) are a universal "to-do list" for the planet, covering 17 areas like climate change, poverty, and clean energy.

The Robot Challenge: Introduce the project: We will be designing a simple robot meant to address a specific SDG (e.g., a robot that sorts plastic or monitors plant health).

Goal: Bridge the gap between AI theory and physical action.

Step 3 – How Machines Learn: Reinforcement Learning (Classroom – 45 minutes)
Key Question: How do you teach a robot to perform a task without giving it specific instructions?

The RL Framework: Explain that AI often learns through "Trial and Error," much like training a dog with treats.

- The Agent: The "brain" (the robot).
- The Environment: The world the robot lives in.
- The Action: What the robot chooses to do.
- The Reward: A "+" point for a good move, a "-" point for a mistake.

Suggested Facilitation: Show videos of RL in action (e.g., an AI learning to play Hide and Seek or a robotic arm learning to flip a pancake).

Discuss: What was the "reward" in the video? How many times did the agent fail before it succeeded?

Step 4 – Recap & Homework (15 minutes)
Key Question: How will your robot change the world?

The Assignment: Students must take the basic robot design started in class and expand it.

1. Integrate an SDG: Specify exactly which goal the robot helps achieve.
2. Define the RL Loop: If your robot used Reinforcement Learning, what would be the "Reward" and what would be the "Penalty"?
3. Sketch/Describe: Add one unique feature that addresses a limitation discussed in "The Illusion of Thinking."

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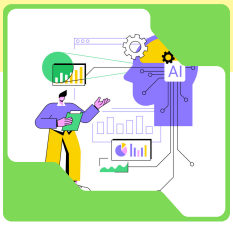

Illusion is all that matters

Expected Output. What do participants create, produce or gain from the exploration?

- Completed "**The_Illusion_of_thinking-Analysis_Sheet**" with structured observations.
- A clear understanding of the difference between human **consciousness** and **AI pattern** recognition.
- Ability to:
  - Explain the **Reinforcement Learning** (RL) loop (Agent, Action, Environment, Reward).
  - Connect technological solutions to specific **Sustainable Development Goals** (SDGs).
  - Analyze the **ethical** "gap" in AI decision-making.
- A conceptual **blueprint for a simple robot** designed to solve a global challenge.
- First steps toward becoming **critical and ethical digital creators**.

The Hook and the Playfulness. What makes this fun/exciting for young people?

- **De-bunking the Magic**: Students act as "Philosopher-Engineers" to pull back the curtain on AI "thinking".
- The **Reward Game**: Using videos of AI learning through trial and error to see how "failure" leads to success in RL.
- **Mission-Based Design**: Students aren't just making a robot; they are designing a tool to save the planet (SDGs).
- **Creative Freedom**: Moving from reading a paper to sketching their own unique robot upgrades.
- **Challenging the Machine**: Trying to find things humans can do that AI simply cannot.

Success indicators. How do we know it worked? What shows participants learned?

- Students can:
  - Correcty define the elements of **Reinforcement Learning**.
  - Articulate why an AI's "**understanding**" is often considered an illusion based on data patterns.
  - Map a **robotic function** to a specific **SDG** (e.g., "This robot helps Goal 14 by cleaning oceans").
  - Justify their homework additions based on the technical limits of AI.
- Improved depth of analysis in the shared classroom discussion regarding the "**Illusion of Thinking**" paper.
- Ability to reformulate the key message: "**AI doesn't think like us, but we can teach it to help us solve the world's biggest problems**".

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Appendix - Example of material (duplicate if needed)

Appendix 1

Step 2 - Robots for Good: Intro to SDGs

Content of the appendix

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