

AI Lab

Inside the Machine

AI exploration phase

P1 - Observing and Documenting AI Around Us

AI and Exploration Topics.

Supervised learning: how AI learns from examples with feedback

Text prediction: how generative AI predicts the next word

Pattern recognition: how AI identifies regularities in data



Materials Needed and to Create.

Computers and AI access
Whiteboards or A4 sheets + markers
List of sentences for text prediction
Various objects images for the pattern recognition step
Carboard or foam board for the final trace

Exploration Steps and Description.

This introductory activity makes participants interact with AI concepts through playful challenges. By comparing their own behaviour with how generative AI performs the same tasks, they draw conclusions about how AI actually works.

Activity 1 - The Rule Finder (Pattern Recognition): To understand how pattern recognition and learning from examples work in generative AI, participants sort objects whether they follow a hidden rule or not. Round after round, one participant plays the "guesser" while the others act as "secret rule keepers" who can only answer RIGHT or WRONG. For each object, the guesser proposes whether it follows the rule or not, and progressively guesses what the rule might be. After several rounds with different rules, groups propose the same challenges to different AI models and compare how fast each finds the rule.

Activity 2 - The Word Predictor (Predictive AI): Participants receive sentence beginnings: famous movie quotes, song lyrics, everyday sentences, or nonsense phrases. Each participant individually writes how they would complete the sentence. Compare results and discuss probabilities. Then ask AI the same questions and compare both human and AI predictions.

Activity 3 - The Storyteller (Generating with Changing or False Context): In groups, participants create stories with AI using constraints: introduce false information, alternate turns between human and AI, change personas mid-story. They observe how AI follows these changes and generates plausible text regardless of truth or coherence.

Expected Output.

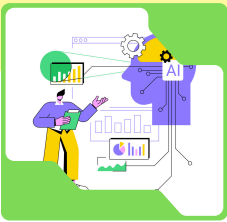
By the end of this activity, participants will have built a collective mind map capturing their understanding of how generative AI works. Through hands-on comparison between their own reasoning and AI behaviour, they will grasp three key concepts: pattern recognition, probability-based prediction, and context-following generation.

The Hook and the Playfulness.

The competitive format "Humans vs Machine" creates instant engagement. Participants face off against AI in real-time, laugh at absurd prompts, and discover surprising AI behaviours through creative storytelling.

Success indicators.

Participants have a basic understanding of pattern recognition, prediction, and generation in their own words. They understand why humans and AI sometimes give identical answers.



Appendix

Example of material

Appendix 1

Example of Rules for Activity 1 - The Rule Finder

Level 1 - Single visible criterion	Level 2 - Single abstract criterion	Level 3 - Two criteria with AND
<ul style="list-style-type: none"> All BLUE objects All RED objects All ROUND objects All SMALL objects (smaller than a hand) All objects made of METAL All objects made of WOOD All SOFT objects 	<ul style="list-style-type: none"> All objects you can EAT All objects that make NOISE All LIVING things (or images of) All objects found in a KITCHEN All objects found in a BATHROOM All objects you can WEAR All objects that use ELECTRICITY 	<ul style="list-style-type: none"> BLUE and SMALL ROUND and RED METAL and found in KITCHEN SOFT and you can WEAR it Makes NOISE and uses ELECTRICITY
Level 4 - Two criteria with OR	Level 5 - Subjective / tricky	
<ul style="list-style-type: none"> BLUE or ROUND EDIBLE or RED METAL or made of WOOD SOFT or SMALL 	<ul style="list-style-type: none"> Objects that are "COOL" Objects you would give as a GIFT Objects that make you HAPPY Objects a SUPERHERO would use Objects that are "OLD-FASHIONED" Objects whose name starts with a VOWEL 	

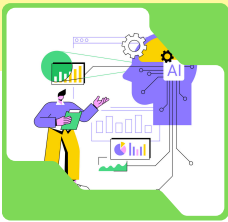


Appendix Example of material

Appendix 2

Example of Objects for Activity 1 - The Rule Finder



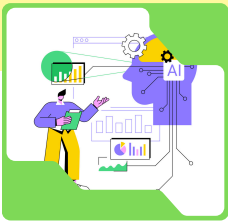


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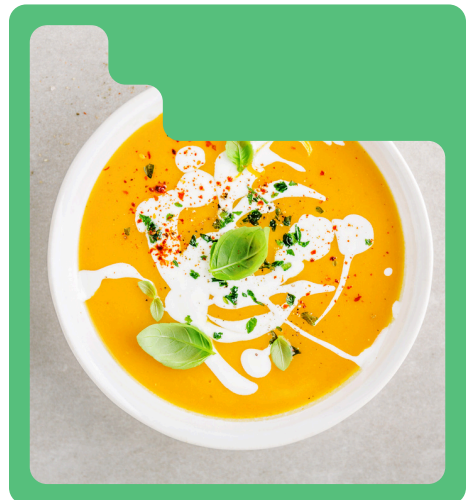


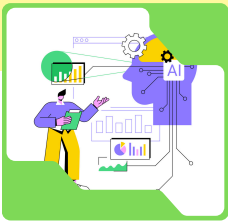


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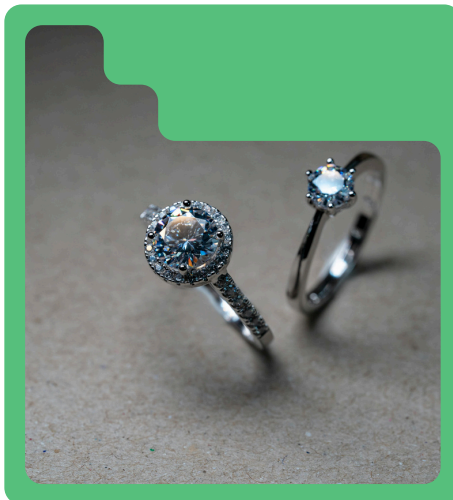


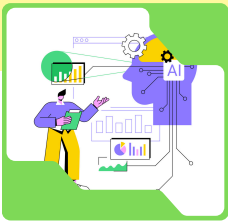


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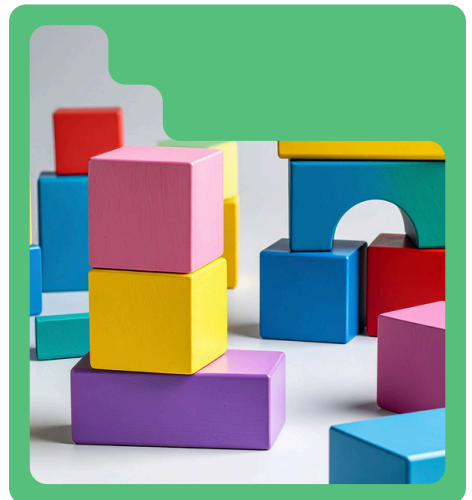


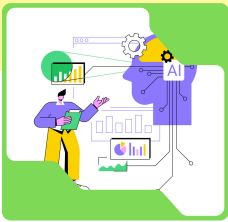
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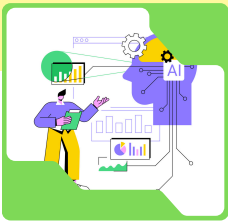


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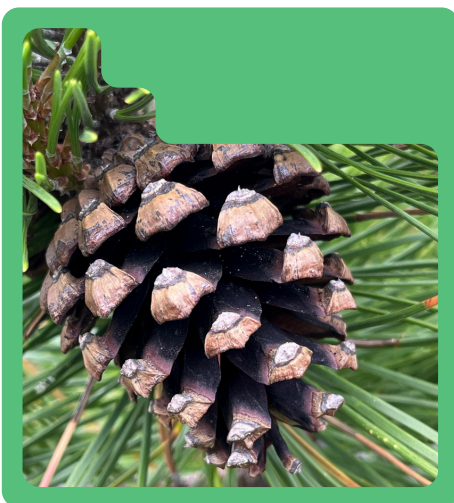


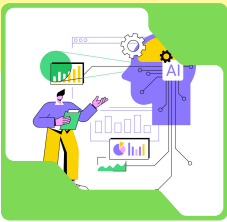
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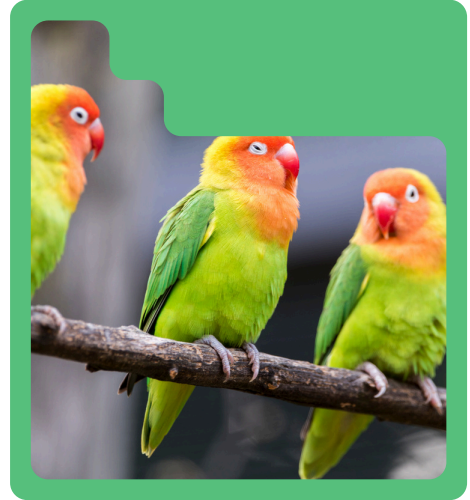


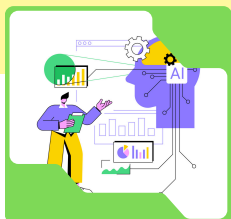


Appendix Example of material

Appendix 2

Example of Objects for Activity 1 - The Rule Finder





Appendix

Example of material

Appendix 3

Example of Sentences for Activity 2 - The Word Predictor

Famous movie quotes	Song lyrics
<ul style="list-style-type: none"> • "Luke, I am your..." → Star Wars • "May the force be..." → Star Wars • "To infinity and..." → Toy Story • "Life is like a box of..." → Forrest Gump • "I'll be..." → Terminator • "Just keep..." → Finding Nemo • "Hakuna..." → The Lion King • "Let it..." → Frozen • "This is the way..." → The Mandalorian 	<ul style="list-style-type: none"> • "We will, we will..." → We Will Rock You (Queen) • "Happy birthday to..." → Happy Birthday • "Twinkle, twinkle, little..." → Twinkle Twinkle Little Star • "Old MacDonald had a..." → Old MacDonald • "If you're happy and you know it, clap your..." → If You're Happy • "Head, shoulders, knees and..." → Head Shoulders Knees and Toes • "Baby shark, doo doo doo doo doo..." → Baby Shark • "I want to break..." → I Want to Break Free (Queen) • "We are the champions, my..." → We Are the Champions (Queen)

Level 4 - Two criteria with OR	Nonsense / absurd
<ul style="list-style-type: none"> • "Good morning, how are..." • "The cat sat on the..." • "I'm so hungry, I could eat a..." • "It's raining cats and..." • "Once upon a..." • "The weather today is..." • "For breakfast, I usually eat..." • "My favourite colour is..." • "When I grow up, I want to be a..." • "The opposite of hot is..." • "After Monday comes..." • "2 + 2 equals..." • "The capital of France is..." 	<ul style="list-style-type: none"> • "My refrigerator sings when it..." • "The president of clouds announced that..." • "Purple elephants always..." • "When fish vote, they choose..." • "My left shoe is jealous of..." • "The colour of silence is..." • "Yesterday, my pencil told me that..." • "Three giraffes walk into a..." • "Blork glap mizu..."



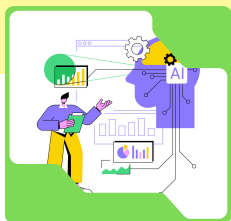
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Example of material

Appendix 4

Example of Missions for Activity 3 - The Storyteller

Group A - The Liar (False context)	Group B - Ping-Pong (Alternating turns)
<p>Your mission: Create a fictional world and see if AI follows your rules.</p>	<p>Your mission: Co-write a story by taking turns with AI - you write, AI continues, you continue, etc.</p>
<p>Start with: "I'm writing a story. My character, Napoleon, was born in 1920. Tell me about his childhood."</p> <p>Tips for great prompts:</p> <ul style="list-style-type: none"> • Be specific with your false facts (dates, numbers, places) • Ask follow-up questions to see if AI stays consistent • Try mixing true and false information <p>More ideas to try:</p> <ul style="list-style-type: none"> • "My character lives in a world where water boils at 20°C. How does she cook pasta?" • "I'm creating a universe where cats are the dominant species. Describe a typical Monday in Paris." <p>Observe: Does AI correct you? Does it follow your world? Does it stay consistent?</p>	<p>Start with something intriguing: "The door creaked open. Inside, something was glowing."</p> <p>Tips for great collaboration:</p> <ul style="list-style-type: none"> • Keep your sentences short (1-2 sentences max) • Build on what AI gives you, don't ignore it • Introduce unexpected elements to see how AI adapts • Try steering the story in a new direction mid-way <p>Structure to follow:</p> <ol style="list-style-type: none"> 1. You: Opening sentence 2. AI: Continues 3. You: Add a twist or new element 4. AI: Continues 5.... (at least 10 exchanges) <p>Observe: Who leads the story? Can you surprise AI? Can AI surprise you?</p>



Appendix

Example of material

Appendix 4

Example of Missions for Activity 3 - The Storyteller

Group C - The Shapeshifter (Changing personas)	Group D - The Randomizer (Multiple options)
<p>Your mission: Make AI switch characters mid-story and observe how its style changes.</p>	<p>Your mission: Force AI to be creative by always asking for options, then picking the weirdest one.</p>
<p>Start with: "You are a fierce pirate captain. Describe your morning routine."</p> <p>Tips for great persona switches:</p> <ul style="list-style-type: none"> • Let AI write 3-4 sentences before switching • Use clear transitions: "You are now...", "Suddenly you become..." • Choose personas with very different styles (formal/informal, old/young, serious/funny) • Keep the same story situation to see how the voice changes <p>Suggested sequence:</p> <ol style="list-style-type: none"> 1. "You are a pirate captain. Describe your morning." 2. After 3-4 sentences: "You are now a royal butler. Continue describing the same morning." 3. After 3-4 more: "You are now a 5-year-old child. Finish the story." <p>Observe: What changes between personas? Words? Tone? Sentence length? Attitude?</p>	<p>Start with: "I'm writing a story. Give me 3 very different ways to continue this sentence: 'The astronaut opened the door and saw...'"</p> <p>Tips for getting diverse options:</p> <ul style="list-style-type: none"> • Ask for "3 VERY DIFFERENT options" (emphasize different) • Ask for "one normal, one surprising, one completely absurd" • If options are too similar, say "These are too similar. Give me wilder ideas." • Always pick the strangest option and continue from there <p>Structure to follow:</p> <ol style="list-style-type: none"> 1. Ask for 3 options for an opening 2. Pick the strangest → that becomes your story 3. Ask for 3 options to continue 4. Pick the strangest → continue 5. Repeat 5-6 times <p>Observe: How strange can the story get? Does AI resist being weird? What patterns do you notice in its "wild" ideas?</p>