

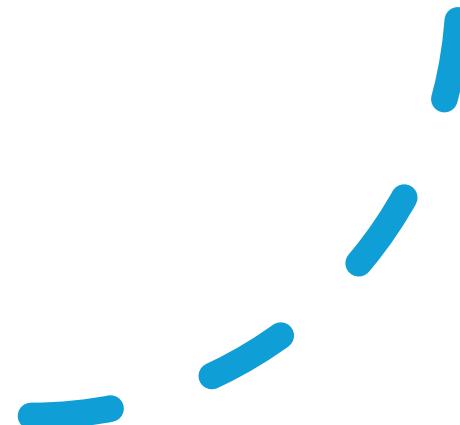


# Hello AI!

Basics of Prompt Engineering

# General Overview of AI

- Linear & Logistic Regression
- Deep Learning
- Generative AI

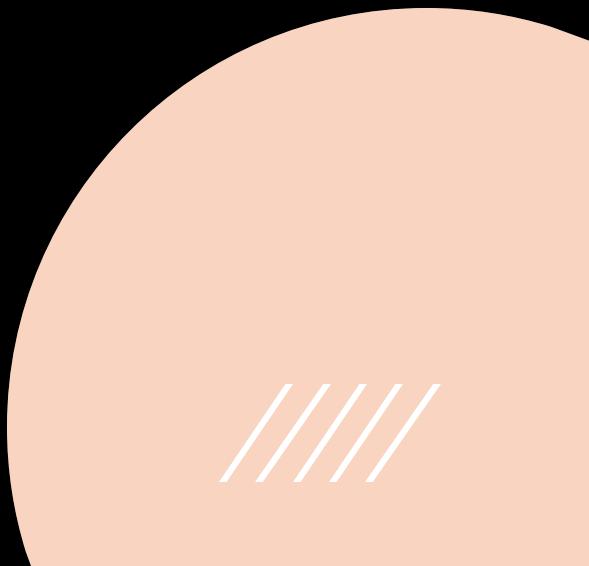
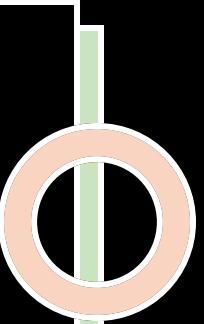


# Prompt!?



# Activity 1 :

## "Human AI"



**"Brief me about a Plane"**

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## **Interpretation**

## **Domain**

Aircraft	Aerospace / Industrial Design
Geometric plane	Mathematics
Woodworking plane	Product / Tool Design
Flat surface	Architecture / Visual Design
Conceptual plane	Theory / Philosophy
Service plane	UX / Service Design

"Create a logo for a  
coffee shop."

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## Why is it bad?

- **No Style:** Is it minimalist? Vintage? Cyberpunk?
  - **No Audience:** Is it for busy commuters or luxury brunch-goers?
  - **No Format:** Is it a vector? A 3D mockup? A sketch?
-

# Anatomy/Framework

....of a Good Prompt

**ROLE  
TASK  
CONTEXT  
CONSTRAINTS  
OUTPUT**



# Step A : Assign a **ROLE**

Tell the AI who it needs to be.

**Updated Prompt:**

"**You are an expert Brand Strategist and Graphic Designer.** Create a logo for a coffee shop."

# Step B : Add Specific CONTEXT

Give the "brand story."

**Updated Prompt:** "You are an expert Brand Strategist. Create a logo for a coffee shop **called 'Lunar Brew.'** It is a space-themed, late-night cafe located in a bustling urban tech hub, catering to programmers and night owls."

# Step C : Define the **TASK** (The Creative Brief)

Instead of just "design," give specific aesthetic directions.

**Updated Prompt:** "...Create a **minimalist line-art logo**. The design should incorporate **celestial elements** (like a crescent moon) merged with coffee imagery (like a steaming mug or coffee bean)."

# Step D : Set **CONSTRAINTS & TONE**

Tell it what to avoid and what "vibe" to hit.

**Updated Prompt:** "...The vibe should be **calm, sophisticated, and nocturnal**. Avoid bright colors or 'cartoonish' astronauts. **Use a color palette of deep navy, silver, and charcoal.**"

# Step E : Define the **OUTPUT** Format

How do you want the result? (Useful for text-based brainstorming or image generation).

**Final Prompt:** "You are an expert Brand Strategist. Create a detailed visual description for a logo for 'Lunar Brew,' a space-themed late-night cafe for tech professionals. The logo should be a minimalist line-art mark combining a crescent moon with a coffee bean. The mood is sophisticated and nocturnal. Use navy and silver. **Present the output as three distinct design concepts, each with a rationale for why it fits the target audience.**"

Change One specific aspect and observe how the output changes!

# **Commonly Used Framework**

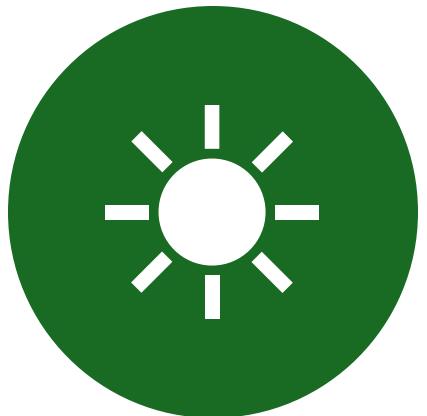
- PARTS
- COSTAR
- RUCS
- ORMP
- COS



**Activity :**  
**Better Prompting**



TOPIC 1: MENTAL HEALTH  
/ WELLBEING APP

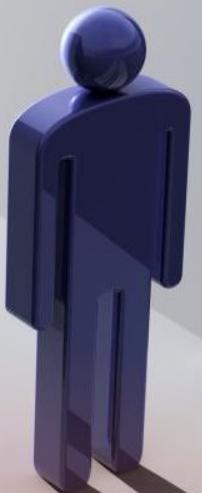


TOPIC 2: SUSTAINABILITY  
/ CLIMATE DESIGN



TOPIC 3: EDUCATIONAL  
PRODUCT FOR CHILDREN

# Ethics in AI



**Ethics in AI** is about making sure artificial intelligence is designed and used in ways that are **fair, safe, responsible, and beneficial to people.**

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## Privacy

AI often uses large amounts of personal data.

**Ethical concern:** How data is collected, stored, and used without violating people's privacy.

## Transparency & Explainability

Many AI systems are “black boxes,” meaning we don’t know how they make decisions.

**Ethical goal:** People should be able to understand and question AI decisions, especially in areas like school, healthcare, or law.

## Accountability

If an AI system causes harm, who is responsible : the developer, the company, or the user?

**Ethical principle:** Humans must remain accountable for AI decisions.

## Safety & Reliability

AI should work as intended and not cause harm, even by accident.

**Example:** Self-driving cars or medical AI must be carefully tested.

# Deepfake Misinformation

**What happened:** New AI tool can create highly realistic but false videos of riots and election fraud.

**Impact:** Potential to *mislead public opinion* and destabilize society.

**Ethical question:** Who is responsible for managing misinformation created by AI?

# Online Abuse

**What happened:** AI used to generate content that amplifies abuse

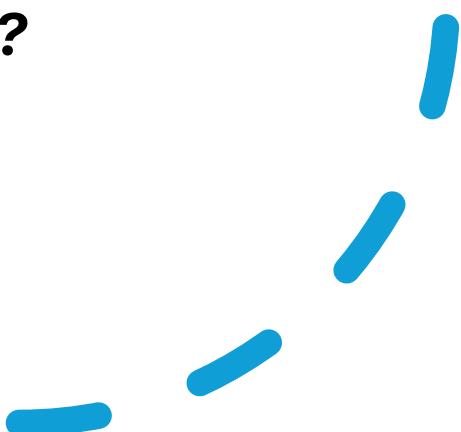
**Impact:** Harassment, emotional harm, unhealthy online culture.

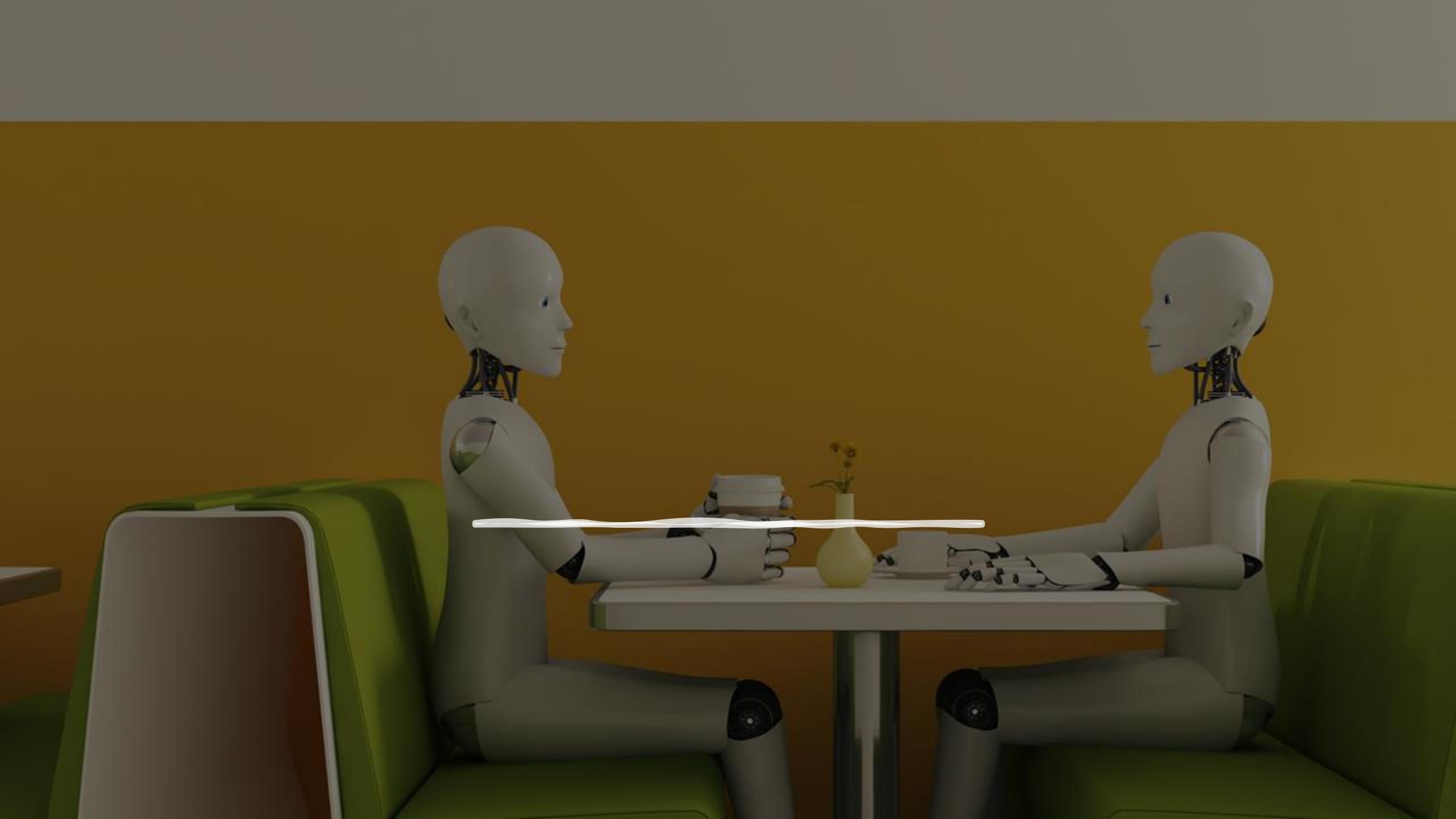
**Ethical question:** What controls should platforms and creators implement?



AI is not inherently good or bad  
- its use and impact depend  
on "**how**" people use it.

As designers and creators, we must think about:

- ***Who could be harmed?***
  - ***How could this output be misused?***
  - ***What safeguards are possible?***
- 



Given the rise of GenAI, should  
"you" as a designer avoid using AI  
tools in the *early ideation stage* of  
design work?



# AI and Critical Thinking



## Research findings :

### **1. Overreliance on AI can reduce critical engagement**

A study by Microsoft Research & Carnegie Mellon University found that knowledge workers who placed high confidence in AI tools tended to engage in *less critical thinking*, especially in routine tasks. [THE Journal](#)

### **2. AI tools may reduce deep reflective thinking**

Another report suggests that frequent use of AI tools correlates with *lower opportunities for independent analysis and evaluation*, especially among younger users. [PsyPost - Psychology News](#)

### **3. Mixed evidence exists**

Some studies show AI can support critical thinking when used with guidance, but **unguided use risks cognitive offloading** (letting machines do the thinking). [MDPI](#)

**Study:** “*The Impact of Generative AI on Critical Thinking: Self-Reported Reductions in Cognitive Effort and Confidence Effects...*”

- Surveyed 319 knowledge workers using GenAI tools
- Found *higher trust in AI* → *less critical thinking*
- Users shifted effort from thinking to *verifying AI outputs*

 (Original study by Microsoft Research & Carnegie Mellon) [THE Journal](#)

 **Research link (for your reference):**

<https://www.microsoft.com/en-us/research/publication/the-impact-of-generative-ai-on-critical-thinking-self-reported-reductions-in-cognitive-effort-and-confidence-effects-from-a-survey-of-knowledge-workers/>

- **The "Thinking to Checking" Shift:** Instead of starting with a blank canvas and brainstorming ideas from scratch (generative thinking), users are now spending most of their energy reviewing and fixing what the AI produces (evaluative thinking).
- **Cognitive Offloading:** People are "outsourcing" the hard mental labor of structuring thoughts or drafting initial concepts to AI, which reduces the overall mental fatigue of starting a project.
- **The Overconfidence Trap:** Because AI produces professional-looking results instantly, users often feel more confident in the work than they should be, sometimes overlooking small errors.
- **Verification is the New Skill:** The study suggests that "Critical Thinking" is no longer about coming up with the idea, but about having the expertise to spot when an AI-generated design or text is technically flawed or off-brand.
- **Loss of "Deep Grooves":** There is a concern that by skipping the struggle of the initial "messy" creative phase, users might lose some of the deep learning that happens when you solve a problem manually.
- **Efficiency vs. Originality:** While the shift makes work much faster, the effort moves away from deep original exploration toward "satisficing"—accepting an output that is "good enough" rather than pushing for something unique.