



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"



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."





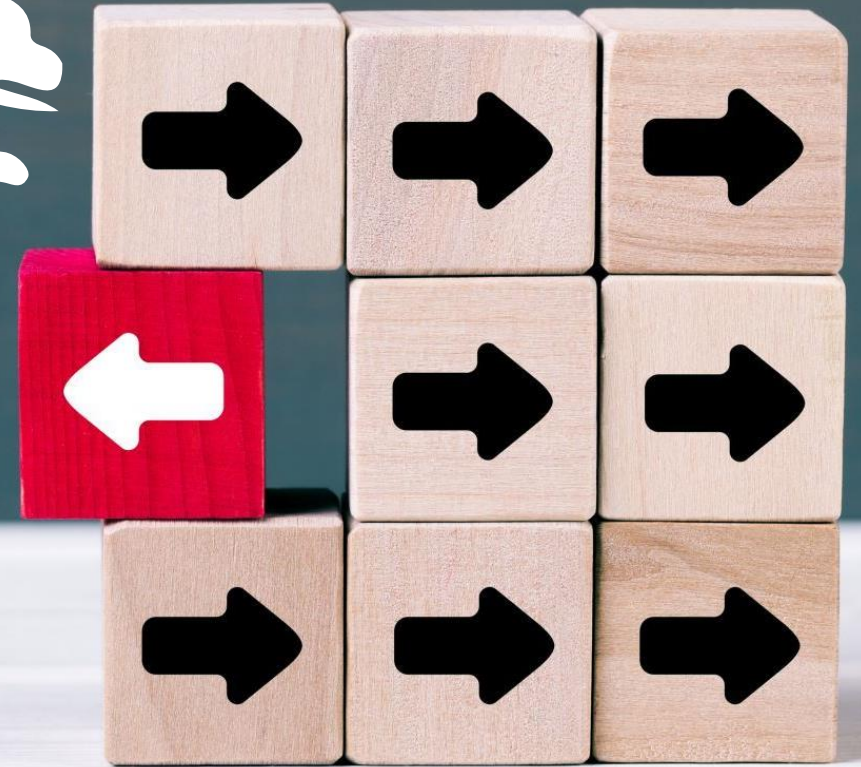
Why is it bad?

- **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?
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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

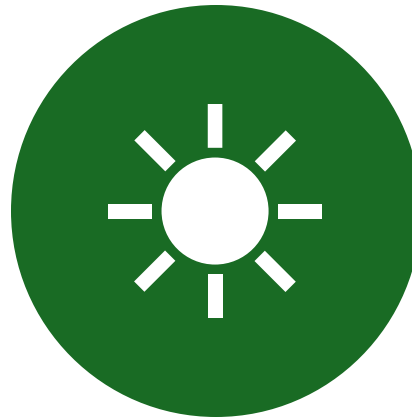
- **PARTS**
- **COSTAR**
- **RUCS**
- **ORMP**
- **COS**



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.**

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.

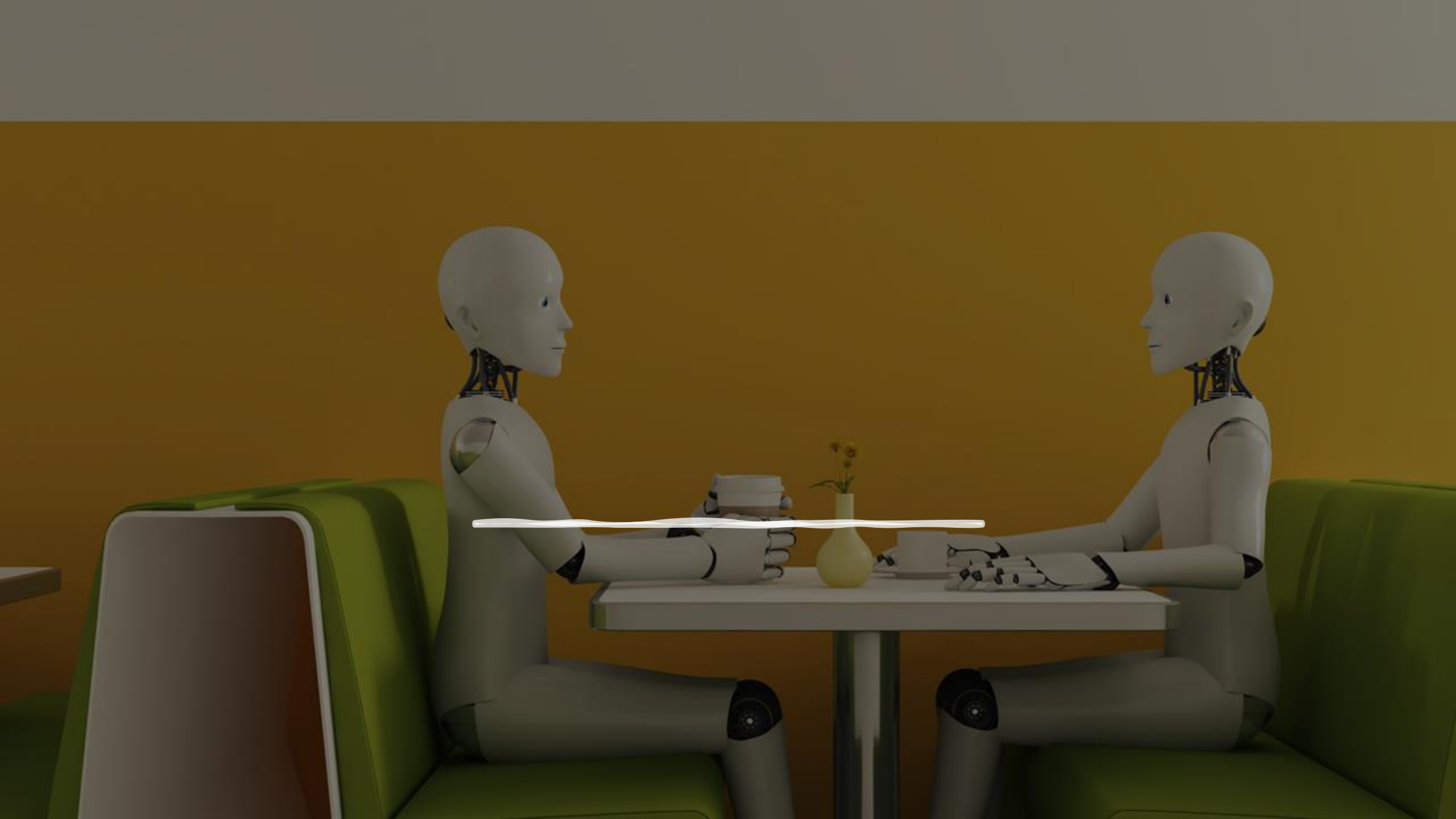
Ethical question: What controls should platforms and creators implement?



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 designers 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.