

# Mastering GenAl Prompts

A Practical Guide for Students

A beginner-friendly course to help students write better prompts, explore AI tools, and use them effectively for learning, studying, and school projects

Course By: Harish Manickababu



## **Course Outline**

- Introduction to Generative Al
- **2** Effective Prompting
- 3 Applications of GenAl
- 4 Advanced Techniques





## What is GenAl?



Powerful AI technology

GenAl can create human-like text, images, and other content based on prompts



Streamlines learning

GenAI has immense potential to help students learn more efficiently

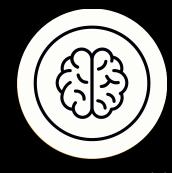
GenAl is a transformative technology that can empower students to learn more effectively and efficiently through the use of prompts.

## How GenAl Works?



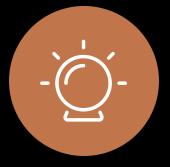
#### Massive Data Training

AI is trained on books, websites, code, and more — billions of words and images.



Pattern Recognition

It learns how words, ideas, and visuals are commonly structured.



**Prediction Engine** 

When you give it a prompt, it predicts what comes next — word by word, like autocomplete on steroids.



**Original Output** 

The AI generates new content (text, code, images) that fits your instructions.

GenAI is trained on massive datasets, learning patterns from billions of examples. When given a prompt, it predicts and generates content based on what it's learned.

## Common GenAl Tools



#### ChatGPT (OpenAI)

- Conversational Al
- Mriting, brainstorming
- Coding help, explanations



#### Gemini (Google)

- Multimodal (text, code, images)
  - Versatile across academic & creative tasks
- Useful for deep queries & factual prompts



#### Claude (Anthropic)

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- Secondarial Secondarial Secondaria Secondari
- Thoughtful writing assistant

There are many GenAI tools out there, No single tool is "best"—they each shine in different use cases.

## How Al Helps Students

BrainstormingGenerate ideas

Overcome writer's block
Explore topics

Create outlines
Formulate starting text
Improve writing flow

Summarizing
 Condense complex info

Highlight key points
Aid comprehension

Research

Find relevant sources
Identify gaps
Support literature review

Learning & Explaining

Explain hard concepts

Personalize understanding

Q&A support anytime

## Limitations & Ethical Considerations

- - Accurate/false information; opinions as facts; verify output.
- M Bias:
  - Reflects training data bias; Reduces independent effort mitigation essential; Use AI
    as a supplement, not a replacement
- Over-reliance:
  - Hinders critical thinking; reduces independent thought; balanced use needed.
- Plagiarism:
  - Concerns about easy text generation; proper citation/attribution required.
- Data Privacy:
  - Privacy concerns with data sharing; be aware of collection, storage, and usage.





## What is a Prompt?

A **prompt** is the instruction you give to a generative AI model. The **clearer and more specific** the prompt, the **better** the output.



? Vague Prompt	⊚ Clear Prompt
Write something about history.	Write a 200-word summary of the causes of the French Revolution for high school.
Create an image of a cat.	Generate a photorealistic image of a tabby cat on a sunny windowsill.
Help me with my essay.	Suggest 3 thesis statements comparing freedom in Scarlet Letter & Huck Finn.



## The CRAFT Framework

The CRAFT Framework helps you write clear and effective prompts for generative Al.

#### Each letter represents a key part of a strong prompt:

- C -- Context What background should the Al know?
- **R** -- Role Who should the AI pretend to be? (e.g., teacher, coder)
- **X** A -- Action What should the AI do? (e.g., explain, list, write)
- **F -- Format** How should the response be structured? (list, email, code)
- 🜹 **T -- Tone** What tone should the response have? (formal, casual, persuasive)
- Example Prompt Using CRAFT:

"I'm a 10th grader preparing a persuasive essay on school uniforms (Context). Act as a debate coach (Role). Suggest three strong arguments (Action), listed in bullet points (Format), using a confident and persuasive tone (Tone)."

## **Few-Shot Prompting Basics**

Relevant examples in prompts improve generative AI performance.

Prompting Type	© Example
1 Zero-Shot	"Translate 'hello' to Spanish."
1 One-Shot	"English: hello → Spanish: hola English: goodbye → Spanish: ?"
3 Few-Shot	English: hello → Spanish: hola. English: thank you → Spanish: gracias English: goodbye → Spanish: adiós. English: please → Spanish: ?"



The more examples you give, the better the AI can recognize patterns and generate accurate outputs.



## **Essay Drafting & Idea Generation**

Here are examples of prompts to help with various stages of essay writing:

### **Brainstorming:**

Essay topics on space exploration impact.

Arguments for/against Al in education.



#### Outlining:

Outline a 5-paragraph essay on deforestation.

Research paper outline on space exploration.



Create a thesis arguing a climate change solution.

Thesis statements for comparing Emily Dickinson poems.



## Essay Drafting & Idea Generation

Al supports: ideas, structure, feedback.

Topic Selection Brainstorming Thesis Draft Revise



Section 3

## Applications of GenAl



Section 3

## Applications of GenAl

Learning Objectives:

Discover practical ways to use GenAI for tasks like essays, studying, and project planning.

Explore example prompts you can adapt for schoolwork and revision.

## Creating Flashcards

**6** Why Use AI for Flashcards?

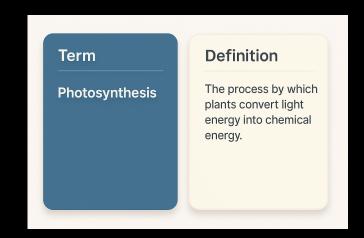
Prompts can help generate fast, customized study sets for any subject.

## Vocabulary Flashcards

- "Generate 10 English vocab flashcards with definitions and sample sentences."
- "Make 5 flashcards for biology cell cycle terms with short explanations."

## Key Concept Flashcards

- "Flashcards for 5 key concepts from the American Civil War include term + significance."
- "List important Algebra 1 formulas with what each variable means."





## O Don't Blindly Copy Al Output



### Why This Matters

Al is a powerful tool — but only when used **responsibly**.

#### **⚠** Common Pitfalls

**Accuracy Issues:** All can generate outdated or false info.

→ Always verify facts from trusted sources.

**Plagiarism Risk:** Copying AI text without citation is still plagiarism.

→ Give credit if AI significantly contributed to your work.

Missed Learning: Relying fully on AI short-circuits your learning process.

→ Use it to support—not replace—your critical thinking.





## On't Blindly Copy Al Output



<b>√</b> Do	X Don't
Verify Al-generated info	Copy Al output without checking
Use AI as a draft or brainstorming tool	Submit Al output as your own work
Cite AI if required	Let AI do all your writing or analysis
Revise & personalize AI text	Skip learning or critical thinking

## Organizing Assignments & Projects

Al can help you plan schoolwork like a pro — from breaking down big assignments to building checklists and daily study plans.

## ✓ Task Breakdowns (Make big projects feel manageable) - Sample Prompts

- Break down a climate change research paper into steps like topic selection, outline, first draft, and final edit with deadlines for each.
- Create a to-do list for a group website project: who writes the content, who designs the layout, who tests the site?

#### Checklists (Keep track of what's done and what's left) -SamplePrompts

- Make a checklist for a lab report: hypothesis, materials, data table, graph, conclusion.
- Checklist for your history essay: thesis, 3 body paragraphs, 2 sources cited, final proofread.
- List everything needed for your volcano experiment: baking soda, vinegar, model base, timer.

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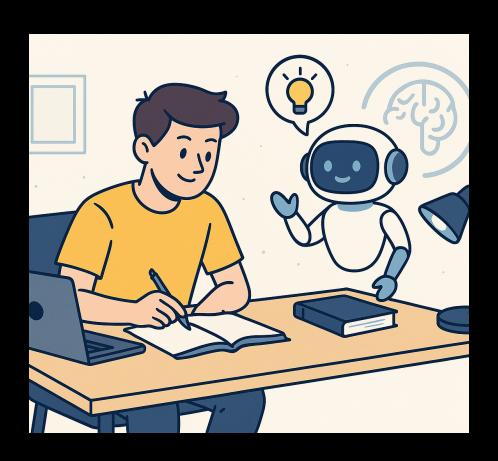
## Study Schedules (Balance study time and life) - Sample Prompts

- Create a weekly study plan for Algebra, English, and Chemistry with short breaks and time for sports or hobbies.
- Build a 2-week plan to prep for finals with more time for subjects you find harder.
- Make a daily schedule that includes homework, meals, free time, and 20-minute review sessions.

## Use Al as an Assistant, Not a Replacement

Al is a **smart helper** — not a shortcut.

It's here to support your learning, not do the thinking for you.





Develop Critical Thinking

Al can give you answers — but only you can evaluate what makes sense, what's useful, and what's fair.

Maintain Your Voice

Let AI help with structure or clarity, but **your ideas and voice** should shine through.

Focus on Learning

Using AI is like using a calculator — useful, but not a replacement for **understanding** the process.



Advanced Techniques



## Chain of Thought Prompting

## What Is It?

- Chain of Thought (CoT) prompting helps AI "think out loud."
- Instead of giving just an answer, it explains step-by-step reasoning to reach it.

## Why Use CoT Prompting?

- Improves accuracy on complex problems
- Makes the Al's thinking more transparent
- Breaks tasks into smaller, logical steps

## Chain of Thought Prompting

X Standard Prompt	✓ Chain of Thought Prompt
Q: Roger has 5 tennis balls. He buys 2 cans. Each can has 3 balls. How many does he have?	Q: Roger has 5 tennis balls. Buys 2 cans, 3 balls each. How many now?
A: 11	First, calculate the total number of balls in the cans: 2 cans x 3 balls/can = 6 balls
	Step 2:, add the balls from the cans to the initial number of balls: 5 balls + 6 balls = 11 balls
	A: 11



When you ask AI a hard question, it might give the answer too quickly — and get it wrong.

Chain of Thought prompting helps the AI slow down and think step-by-step, just like you would when solving a math problem or writing an essay.



## Understanding Al Bias and Hallucination

### Mhy It Matters

 Al is powerful — but not perfect. It can sometimes reflect human bias or just make things up. That's why you need to stay alert.

#### M Al Bias

- Al learns from the internet, books, and articles which can include stereotypes and unfair assumptions.
- These patterns may show up in Al answers without warning.
- Example: The AI describes a nurse using only "she" and a doctor using only "he."

#### Al Hallucination

- Sometimes Al just makes up stuff that sounds real like fake facts, dates, or sources.
- This can happen when the AI is unsure or trying to fill in gaps.
- **Example:** A student asks about a when was Eiffel Tower built, and the AI replies as 1683, (This is made up, not real).

## How to Address Al Bias and Hallucination

#### 💡 What You Can Do

• Even though AI can be biased or wrong, there are smart ways to use it safely and responsibly.

#### Tips to Handle AI Bias

- Be Aware of Stereotypes
  - If something sounds unfair or one-sided, question it.
- Ask for Multiple Perspectives
  - Prompt: "Give pros and cons from different points of view."
- Rephrase or Challenge Responses
  - Prompt: "Rewrite this using gender-neutral language." or "Is this assumption fair?"

#### Tips to Handle AI Hallucination

- Double-Check Facts
  - Look up answers in **trusted sources** like textbooks or educational sites.
- Ask for Sources
  - Prompt: "What's the source of this information?"
- Use AI for Ideas. Not Final Answers
  - Especially for historical facts, science terms, or citations always confirm.

## **Advanced Techniques**

#### Prompt Chaining

- What it is: Breaking down a complex task into a series of smaller, linked prompts.
- Example: First prompt generates research questions → next prompt expands one → next prompt drafts an outline.
- Why it's useful: Helps with large projects like essays, presentations, or experiments.

#### Self-Refinement Prompts

- Technique: Ask the AI to review or critique its own response.
- Prompt: "Now critique your previous answer and improve it for clarity."
- Skills reinforced: Iteration, quality control, critical thinking.

#### Multi-Tool Prompting

- Concept: Use different GenAl tools for different tasks.
- Example: Claude for summarizing long texts, ChatGPT for creative writing, Gemini for code or factual accuracy.
- Lesson: No one tool does it all smart users mix & match.



## Practice Academic Integrity

#### Why It Matters

Using AI in school is okay — as long as you're honest, respectful, and responsible.

#### **Ethical Use**

- Use AI to learn and explore, not to replace your thinking.
- Be transparent about how you used AI (e.g., research, outline help).
- Respect copyright and original ideas don't pass off AI content as your own.

### Citing Al Tools

- Treat AI like any other **outside source**.
- Follow your school's **citation rules** MLA, APA, etc.

#### **Know the Rules**

- Every school is different check your Al usage policy.
- Not sure what's allowed? → **Ask your teacher**.
- Breaking rules can lead to **plagiarism consequences** even if unintentional.



## Course Conclusion & Resources

What GenAl Is: How it works and what makes it powerful

Prompting Skills: Clear prompts, CRAFT framework, Chain of Thought

Real-World Uses: Study help, writing support, flashcards

Limitations & Ethics: Bias, hallucinations, academic integrity

## Thank You! Harish Manickababu

