

# AI Prompt Cards

## Components of AI Prompts

A prompt can contain any of the following components:

**Instruction:** What you want the AI to **do** or **create**.

e.g. *Generate a study guide*

**Context:** The **context** or **audience** for the intended output.

e.g. *for a 1000 level psychology course*

**Input Data:** The **content, topic, or data** that we want the AI to generate a response about.

e.g. *on adolescent brain development*

**Output Indicator:** The **type** or **format** of the output.

e.g. *as an outline with a 2 week study plan.*

Not all the components are required for a prompt and the format depends on the task at hand.

## Example Prompts

### Example 1:

~~Generate a study guide for a 1000 level psychology course on adolescent brain development. Format as an outline .~~

**Instruction  
Output Indicator**

**Context**

**Input Data**

### Example 2:

~~Write directions for a statistics project on hypothesis testing as a table with a check off list of action items~~

**Instruction  
Indicator**

**Context**

**Input Data**

**Output**

### Example 2:

~~Find 3 key words from the following text as a bulleted list~~

**Instruction**

**Context**

**Output Indicator**

Text = "Generative artificial intelligence (AI) tools have become increasingly accessible and will impact teaching and learning in numerous ways. AI technologies such as ChatGPT offer new ways to engage students in critical thinking, writing and analysis. AI also can serve as a tool for instructors in the creation of course material. To effectively use these technologies, instructors will want to understand how generative AI tools work and how they are reshaping our disciplines and workplaces. It also will be important to provide policies for students with explicit information on expectations for disclosing use of AI technologies."

**Input Data**

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Developed by Jordan Register, April, 2023 | Center for Teaching and Learning, UNC Charlotte

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## Research and Idea Generation

### Research Topics

- *Generate potential topics to explore for a research project in [CONTEXT].*

### Research Questions

- *Generate possible research questions on [INPUT DATA].*
- *Format the following research question according to [CONTEXT].*

### Search for Scholarly Articles

- *Generate a list of peer-reviewed articles on [INPUT DATA].*
- *Generate a list of studies that use [INPUT DATA] method to analyze [INPUT DATA].*
  - *EX: Generate a list of studies that use qualitative methods to analyze students' feelings about AI in the classroom.*

### Projects

- *Generate project ideas for a [CONTEXT] on [INPUT DATA]. Format as [OUTPUT INDICATOR].*

### Artifacts

- *Generate possible artifacts that could be created for a project in a [CONTEXT] on [INPUT DATA]. Format as [OUTPUT INDICATOR].*

# Product Generation 1

## Practice Problems

- Generate **[OUTPUT INDICATOR]** practice problems on **[INPUT DATA]** for **[CONTEXT]**.
  - EX: Generate a list of 10 open ended practice problems on solving quadratic equations for a 1000 level Algebra course.

## Case Studies

- Generate a case study on **[INPUT DATA]** for **[CONTEXT]**. Format as **[OUTPUT INDICATOR]**.
  - EX: Generate a case study prompt on nursing ethics for a college nursing course. Format as a table with steps for responding to the case study.

## Code Prototypes

- Generate code in **[INPUT DATA]** for **[INPUT DATA]** with **[OUTPUT INDICATOR]**.
  - EX: Generate code in Python for uploading a csv file with comments.
- Modify the above code to include **[INPUT DATA]** for **[CONTEXT]**.

## Datasets

- Generate a sample dataset with **[INPUT DATA]** as attributes and **[INPUT DATA]** of observations.

## Product Generation 2

### Study Guides

- Develop a study guide for **[CONTEXT]** on **[INPUT DATA]** based on the following learning objectives:

Learning objectives: **[INPUT DATA]**.

Include key concepts, subconcepts, vocabulary review, application problems, and practice problems, formatted as **[OUTPUT INDICATOR]**.

### Concept Maps

- Generate the central idea, main concepts, and subconcepts for a concept map on **[INPUT DATA]** in **[CONTEXT]**.

### Vocabulary Review

- Develop flashcards for review on **[INPUT DATA]** as **[OUTPUT INDICATOR]**
  - EX: Develop flashcards for review on photosynthesis as a two column table with key terms in the left column and definitions in the right column
- Develop a two column table of key vocabulary and definitions on **[INPUT DATA]**.
- Generate a fill-in-the-blanks vocabulary review on **[INPUT DATA]** with an answer key.

### Application Problems

- Generate **[OUTPUT INDICATOR]** real world, application problems on **[INPUT DATA]**

## Analysis

### Make Comparisons

- Compare and contrast **[INPUT DATA]** and **[INPUT DATA]** based on **[CONTEXT]**

### Make Predictions

- Based on **[INPUT DATA]** when will **[INPUT DATA]** occur?
- Based on **[INPUT DATA]** what will happen on/at **[INPUT DATA]**?

### Analyze Data

- Find the **[INPUT DATA]** of the following data points **[INPUT DATA]**
  - EX: find the mean, median, and mode of the following data points  
Data points: 5, 6, 7, 8, 22, 25, 67, 76, 77, 77, 77, 92, 95, 143

## Concept Support

### Vocabulary Support

- Define **[INPUT DATA]** in **[CONTEXT]**
- Explain **[INPUT DATA]** as if to a **[CONTEXT]**.
  - EX: Explain the key players in photosynthesis as if to a middle schooler.
- Give an example of **[INPUT DATA]** in **[CONTEXT]** in a sentence.

### Explain Concepts

- Explain **[INPUT DATA]** as if to a **[CONTEXT]**.
  - EX: Explain the key players in photosynthesis as if to 5th grader

### Learning Conversations

Type in sequence (like you would in a text or chat)

- Generate 5 practice problems on the following learning objectives:  
**[INPUT DATA]**
- Is the solution to #1, **[INPUT DATA]**?
- Can you show me how to solve #1 with explanations?
- Generate another practice question like #1 for me to practice.
- How would you solve #1 using a different method?
- How would you solve it using the **[INPUT DATA]** method?

#### **Repeat process for each question**

- Based on this interaction, what should I study for my upcoming assessment?

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## Process Support

### Explain Procedures

- Explain how to **[INPUT DATA]**
  - EX: Explain how to calculate the mean and standard deviation of 30 data points using Excel.

### Explain Processes

- Explain the process for **[INPUT DATA]**

### Worked Examples

- Provide a worked example of **[INPUT DATA]** with explanations
- How do you solve **[INPUT DATA]**? Provide step by step instructions with explanations.

## Feedback

### Process Feedback

- *Provide feedback on my process for **[INPUT DATA]**.*

*Process: "**[INPUT DATA]**"*

### Diagnostic Tool

- *Find the errors in my solution: **[INPUT DATA]***
- *Find the errors in the following code. Format errors as **[OUTPUT INDICATOR]**.*

*Code: **[INPUT DATA]***

### Writing Feedback

- *Provide feedback on spelling, grammar, syntax, correctness, originality, and structure for the following text. Format as **[OUTPUT INDICATOR]**.*

*Text: **[INPUT DATA]**.*

### Content Feedback

- *Provide feedback on **[INPUT DATA]** for the following statement:*

*Statement: **[INPUT DATA]***

## Project Management

### Generate Project Plans

- *Generate a project plan for a project on [INPUT DATA] that is due on [INPUT DATA]. Include the following requirements in the plan [INPUT DATA]. Include a timeline and group roles for [#] students.*

### Manage Progress and Timelines

- *Create a timeline for a project on [INPUT DATA] due on [INPUT DATA] with the following requirements [INPUT DATA].*

### Develop Group Roles

- *Generate group roles for [INPUT DATA] for a project on [INPUT DATA] with the following requirements [INPUT DATA]. Build group roles based on the following student strengths [INPUT DATA].*

- *EX: Generate group roles for Jordan, Heidi, Jules, and Aubrey for a project on the effects of AI in education with the following requirements. Build group roles based on the following student strengths.*

*Requirements: Literature review, 10 page, double spaced research paper, oral presentation with google slides.*

*Student strengths: Jordan: Content Knowledge, Jules: Project management, Heidi: Writing, Aubrey: Technology*

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