



AI Prompting with CLEAR

Using AI as an effective copilot for powerful projects requires an effective, iterative prompting strategy!



The CLEAR Framework

Your roadmap for effective AI prompting throughout this lab

C

Clarity

Ensure that the prompt is clear and specific, with a clearly defined goal in mind.

L

Logistics

Include practical considerations and details including types of input, steps to take, and desired output.

E

Examples

Provide examples to better describe your intended output. Also helpful to say what you do NOT want.

A

Audience

Identify your target population and include their characteristics, needs, existing knowledge and expectations.

R

Refinement

Refine the prompt by providing constructive feedback and output specifications to optimize results.



Why CLEAR Works for AI Development

- Provides specific context AI needs to generate relevant code
- Reduces back-and-forth iterations and debugging time
- Ensures generated code matches your actual requirements
- Helps AI understand both technical and user experience needs

Sample CLEAR Prompt Structure: "I need to create a [SPECIFIC GOAL] using [TECHNOLOGY]. The system should handle [LOGISTICS/CONSTRAINTS]. Here's an example of the data: [EXAMPLE DATA]. This will be used by [AUDIENCE DESCRIPTION]. Please [SPECIFIC REQUIREMENTS AND REFINEMENTS]."



AI Prompting Tips & Troubleshooting

Best practices for getting excellent results from your AI assistant

🎯 Getting Better Results

- Be Specific:** Instead of "make a calendar," say "make a TV-optimized course schedule display"
- Provide Context:** Always include the CSV structure and sample data
- Ask for Explanations:** "Explain why you chose this approach"
- Iterate:** If the first result isn't quite right, ask for modifications

⌚ Testing AI-Generated Code

- Save Code Properly:** Copy code into appropriate files (.py for Python, .html for web pages)
- Check Dependencies:** If code imports libraries you don't have, ask AI for alternatives
- Test Incrementally:** Don't wait until the end - verify each phase works
- Read the Code:** Try to understand what the AI generated, don't just copy-paste blindly



⚠️ When Things Go Wrong

- Share Error Messages:** Copy exact error text into your next prompt
- Describe the Problem:** "The CSV reader works but the calendar display is blank"
- Ask for Debugging Help:** "How can I test if the time parsing is working correctly?"

Example Debug Prompt: "I'm getting this error: [PASTE EXACT ERROR] The code runs until line X, then fails. I'm trying to [DESCRIBE WHAT SHOULD HAPPEN]. Can you help me debug this and suggest a fix?"