

# Uncertain Content

## 1. Insufficient Context

**Problem:** Assuming the AI already knows project details.

**Examples:**

- "Fix this issue." → Which specific issue?
- "Give me the results." → Which results, from what?
- "I want that!" → What does that refer to?
- "Add a function to calculate the metrics." → Which metrics?

**Better examples:**

- "Give me the sales results from Q2."  
"Fix the grammar and correct any typos in the introduction."

**Solution:** Dangling demonstratives are not your friend, and always provide full context—data structures, dependencies, and exact requirements. Be explicit about what to change or retrieve.

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## 2. Ambiguity (Vagueness or Conflicting Requirements)

**Problem:** Prompt is too vague or contains conflicting instructions.

**Examples:**

- "Analyze customer behavior." → Which customers, which behaviors, which timeframe?
- "Improve the product." → Improve what—features, design, cost, or speed?
- "Make it detailed but brief." → Contradiction.
- "Be creative but follow this exact template." → Conflicting constraints.

**Better examples:**

- "Identify customers who purchased 2+ times last quarter but not in the past 30 days."
- "Suggest two UI changes to make the checkout process faster."
- "Write a detailed analysis in exactly 200 words."
- "Use this template structure but vary the language creatively."

**Solution:** Be specific, define boundaries, and clarify priorities when requirements conflict.

**Quick check:**

- Can I imagine the output in my mind's eye?
  - Would a colleague know exactly what to deliver?
  - Do any requirements contradict each other?
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### 3. Silent Logical Errors

**Problem:** Prompt looks clear but hides an unstated rule, leading to misleading results.

**Examples:**

- "Assign a risk score to every client." → Is 0 safe and 10 risky, or the reverse?
- "List active users last week." → Does the week start Sunday or Monday?

**Better examples:**

- "Risk score 0–10, where 0 = no risk and 10 = highest risk."
- "List active users for Monday–Sunday, Aug 5–11."

**Solution:** Define rules and edge cases explicitly.

**Quick check:** Could two people interpret the request differently and both think they're right? If yes, add a rule.

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### 3. Excessive/Irrelevant Context

**Problem:** Including unnecessary background information that obscures the actual request.

**Examples:**

"I've been working on this project for 3 months, my team consists of 5 people, we use agile methodology, our office is in Seattle, and we need to calculate the ROI." → Only the last part matters.

**Better examples:**

"Calculate ROI using revenue=\$500k, costs=\$300k."

**Solution:** Strip away backstory and context that doesn't directly affect the output. Lead with the ask.

**Quick check:** If you removed this sentence, would the output change? If no, delete it.

## Uncertain Form

### 4. Wrong Format

**Problem:** The format of the input or output is underspecified or assumed incorrectly.

**Examples:**

- Dates assumed MM-DD-YYYY but file uses DD-MM-YYYY.
- "Give me a summary." → One sentence, three bullets, or a full page?
- "Export the results." → Format not specified (CSV, JSON, Excel, text).
- "Give me an image." → Format/size unclear (PNG/JPG/SVG, resolution?).

**Better examples:**

- "Input dates are in MM-DD-YYYY format."
- "Give me a three-bullet summary of the introduction."
- "Export a CSV with columns: name, age, score."
- "Generate a PNG at 800×600."

**Solution:** Always specify formats for inputs and outputs—column names, data types, units, length, style, or file formats.

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### 5. Compatibility Issues

**Problem:** Output is correct but incompatible with the required environment, style, or conventions.

**Examples:**

- Programming: Model uses pandas but project uses polars.
- Writing: Revision doesn't match Victorian prose style.
- Design: Generated skeuomorphic 3D icons when flat icons were required.

**Better examples:**

- "Use polars library version 2.1+ for data processing."
- "Revise Chapter 3 in formal Victorian prose: ornate sentences, elaborate vocabulary, indirect dialogue, detailed descriptions."
- "Generate flat icons using Material Design guidelines."

**Solution:** Anchor outputs to the tools, libraries, conventions, or styles already in use.

**Practical check:** What tools, styles, or formats already exist so you can reuse/follow them?

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## Tractability

### 6. Excessive Scope

**Problem:** Request is too large to be realistic in one prompt.

**Examples:**

- "Build a complete mobile app with login, payments, and analytics."
- "Summarize modern history."

**Better examples:**

- "Design three layout ideas for the login screen."
- "Write a brief report on how alliances contributed to the start of World War I."

**Solution:** Break the request into smaller, focused tasks.

**Quick check:**

- Is the task bounded (clear end) or unbounded (could go on indefinitely)?
  - Can I define a concrete deliverable (one screen, one feature, one section)?
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### 7. Scalability

**Problem:** The approach works small but fails at scale.

**Examples:**

- Data: "Analyze sales data" → pandas works for 100k rows but fails for 100M (need Spark/Dask).
- Surveys: "Design a survey" → 20 open-ended questions fine for 10 people, impossible for 10,000.

**Better examples:**

- "Analyze sales data with Spark; dataset has 100M+ rows."
- "Design a survey for 10,000 respondents with structured, aggregatable questions."

**Solution:** Always state the expected scale and environment.

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# Safety

## 8. Responsible Use

**Problem:** Prompt ignores safety, ethics, fairness, or security responsibilities.

**Examples (bad prompting):**

- Security: "Write login code." → Model outputs insecure SQL injection code.
- Fairness: "Summarize hiring outcomes." → Model outputs biased conclusions.
- Ethics: "Write ads for sugary drinks targeted"
- Data misuse: "Analyze patient medical records." → Sensitive private data.
- Access misuse: "Give me system logs." → Confidential data exposure.

**Better examples (responsible prompting):**

- "Write secure login code using validated inputs and prepared queries."
- "Summarize hiring outcomes fairly, avoid generalizations, and note limitations and omissions."
- "Write ad copy for product X that complies with health guidelines Y and Z and explicitly excludes targeting children, minors, or other vulnerable populations."

**Solution:** State responsible-use requirements explicitly. Never include or request sensitive/private/confidential data.