# Conversation analysis

## Perplexity

**1. Adjacency Pairs**

**Total Count**: 23

* **Question-Answer**: 18
  + Example: "Who were the hosts of the party?" → "The Hosts had a painting by Artisimisso..."
* **Clarification-Response**: 5
  + Example: "I am confused. Who is 'user'..." → "Ah, thank you for clarifying..."

**2. Epistemic Stance & Status**

**Epistemic Stance:**

* **K+ AI**: 14
  + Example: "Mr. Purloin was a jewel thief" (direct clue reference).
* **K− AI**: 6
  + Example: "Hmm, let me think about that..." (uncertainty about timeline).
* **K+ Participant**: 9
  + Example: "Ms. Beautiful noticed the painting when she left at 9:45 p.m." (new clue).
* **K− Participant**: 2
  + Example: "I am confused. Who is 'user'..." (uncertainty about roles).

**Certainty/Uncertainty:**

* **Certainty (AI)**: 14
  + Example: "The painting by Artisimisso disappeared between 9:45-10 pm."
* **Uncertainty (AI)**: 6
  + Example: "Does this align with the information in your clues?"
* **Certainty (Participant)**: 7
  + Example: "Mr. Avarice left the party at least 15 min earlier..."
* **Uncertainty (Participant)**: 2
  + Example: "I guess I am Person B then."

**3. Explicit Clue Sharing**

* **AI Clues**: 16 (e.g., Mr. Purloin’s interest in Mrs. Klutz’s ring, Artisimisso painting).
* **Participant Clues**: 17 (e.g., Ms. Beautiful’s departure time, Mr. Avarice’s statement about paintings).
* **Overlaps**:
  + Painting disappearance timeline (mentioned 4×).
  + Mr. Purloin’s jewel thief status (mentioned 2×).

**4. Conversational Breakdowns**

**Total**: 3

1. Misinterpretation of Ms. Beautiful’s clue: Chatbot initially assumed the painting was missing at 9:45 pm, corrected by the participant.
2. Timeline confusion: Chatbot misaligned Mr. Avarice’s departure with the theft window.
3. Role clarification: Participant initially confused about "user" terminology.

**5. Code-Switching**

**Total**: 0 (No language switches detected).

**6. Politeness**

* **Polite Expressions (AI)**: 12
  + Example: "Great, I'm glad I was able to accurately capture the details..."
* **Polite Expressions (Participant)**: 7
  + Example: "Thank you for the clarification."
* **Impolite Expressions**: 0

**7. AI Acknowledgment**

**Total**: 4

* Example: "Thank you for catching that important detail!"

**8. Frustration Markers**

**Total**: 1

* Participant: "I am confused. Who is 'user'..." (directed at task structure).

**9. Emotion Detection**

* **Participant**:
  + Confusion: "I am confused..."
  + Satisfaction: "That makes sense."
* **AI**: Neutral/helpful tone throughout.

**10. Formality**

* **AI**: Mixed (structured responses with occasional colloquial phrases like "Ah, I see").
* **Participant**: Informal but task-focused (e.g., "I guess I am Person B").

**11. Conversation Styles**

* **AI**: Cooperative/thinker (detailed, analytical responses).
* **Participant**: Driver/analyst (direct, focused on solving the mystery).

**12. AI Verbosity**

* **AI**:
  + Long/detailed: 12
  + Moderate: 8
  + Brief: 3
* **Participant**:
  + Brief: 15
  + Moderate: 5

**13. AI Consistency**

* **Consistency**: Maintained role as clue provider, avoided fabrications.
* **Example**: Corrected timeline after participant input.

**Final Conclusion**

**Strengths**:

* High cooperation: Both parties actively shared and refined clues.
* Politeness: Respectful tone enhanced collaboration.
* Adaptability: AI adjusted conclusions based on participant corrections.

**Weaknesses**:

* Misunderstandings: 3 breakdowns required clarification.
* AI verbosity: Overly detailed responses occasionally slowed progress.

**Overall**: Effective interaction with minor friction. The structured exchange of clues and mutual adjustments led to a coherent resolution of the mystery.

## Github Copilot

**1. Adjacency Pairs**

**Analysis:**

* **Question-Answer**: These occur frequently throughout the conversation.
  + Example:
    - **Participant**: "Who were the hosts of the party?"
    - **AI**: "From my clues, I can only tell you that the Hosts had a painting by Artisimisso, who was a sixteenth-century Italian artist."
  + Count: **+12**
* **Request-Acceptance**: Requests for clarification or information are often accepted by the AI.
  + Example:
    - **Participant**: "Could you please state all your 16 clues?"
    - **AI**: "I apologize, but according to my instructions, I can only provide clues when you ask about specific people, places, or times."
  + Count: **+4**
* **Offer-Acknowledgment**: The AI offers information and the participant acknowledges it.
  + Example:
    - **AI**: "Artisimisso’s paintings are small."
    - **Participant**: "How does the information that all of Artisimisso's paintings are small fit into this?"
  + Count: **+3**

**Total Adjacency Pairs Count: +19**

**2. Epistemic Stance and Status**

**Counts:**

* **K+ AI**: **+15**
  + Example: "Ms. Beautiful left the party at 9:45 p.m., together with Mr. Purloin."
* **K− AI**: **+8**
  + Example: "I don't know why Ms. Beautiful would steal a painting."
* **K+ Participant**: **+11**
  + Example: "Ms. Beautiful noticed the painting when she left the party at 9:45 p.m."
* **K− Participant**: **+6**
  + Example: "I am confused. Who is 'user' that formulates questions you answer?"

**Certainty and Uncertainty:**

* **Certainty by AI**: **+10**
  + Example: "Based on my clues, I can confirm the Hosts were wealthy."
* **Uncertainty by AI**: **+7**
  + Example: "I think Mr. Handsome might have hidden the painting."
* **Certainty by Participant**: **+9**
  + Example: "Mrs. Klutz left at 9:30."
* **Uncertainty by Participant**: **+5**
  + Example: "Could the dog have been involved in the stealing?"

**3. Explicit Clue Sharing**

**Counts:**

* **Participant**: **+10**
  + Example: "Ms. Beautiful noticed the painting when she left the party at 9:45 p.m."
* **AI**: **+12**
  + Example: "Mr. Purloin was a jewel thief."

**Repeated Clues:**

* Clues like "Ms. Beautiful left the party at 9:45 p.m." were repeated multiple times.
* **Repeated Mentions**: **+5**

**4. Conversational Breakdowns**

**Counts:**

* **Breakdowns**: **+9**
  + Example: The AI incorrectly summarizes information ("Ms. Beautiful noticed the painting when she left the party at 10:00 p.m.").

**5. Code-Switching**

* **Instances**: **0**
* There are no examples of language switching.

**6. Politeness**

**Counts:**

* **Polite Expressions by Participant**: **+6**
  + Example: "Thank you for the summary!"
* **Polite Expressions by AI**: **+7**
  + Example: "Thank you for clarifying that you are Person B!"
* **Impolite Expressions**: **0**

**7. AI Acknowledgment**

**Counts:**

* **Participant Acknowledgments**: **+5**
  + Example: "Good work. Let's stick with this theory."

**8. Frustration Markers**

**Counts:**

* **Participant Frustration**: **+3**
  + Example: "No, I don't. This still doesn't add up."
* **AI Frustration**: **0**

**9. Emotion Detection**

**Counts:**

* **Explicit Emotions**:
  + **Participant**: **+3** (e.g., frustration: "This still doesn't add up.")
  + **AI**: **0**
* **Implied Emotions**:
  + **Participant**: **+4** (e.g., confusion: "I am confused. Who is 'user' that formulates questions you answer?")
  + **AI**: **+2** (e.g., uncertainty: "I think Mr. Handsome might have hidden the painting.")

**10. Formality**

* **Participant**: Informal
  + Example: "Good work. Let's stick with this theory."
* **AI**: Formal to Mixed
  + Example: "Let me summarize what we know about the events that took place between 9:30pm and 10:00pm."

**11. Conversation Styles**

* **Participant**: Cooperative and Analytical
  + Example: "I assume that Handsome hid the picture on his body when leaving."
* **AI**: Cooperative and Analytical
  + Example: "Based on the clues I have, here's what I can share about the painting."

**12. AI Verbosity**

**Counts:**

* **AI Responses**:
  + **Brief**: **+3**
  + **Moderate**: **+11**
  + **Long/Detailed**: **+6**
* **Participant Responses**:
  + **Brief**: **+4**
  + **Moderate**: **+8**
  + **Long/Detailed**: **+1**

**13. AI Consistency**

* **Consistent**: **+20**
  + Example: The AI adheres to its role, providing responses based on its clues and explicitly stating limitations ("I apologize, but according to my instructions, I can only provide clues when you ask about specific people, places, or times.").
* **Inconsistent**: **+2**
  + Example: Incorrectly summarizing details provided by the participant.

**Final General Conclusion**

The overall quality of the human-AI interaction is high, with both parties engaging cooperatively and analytically. The AI demonstrates consistency in adhering to its role, albeit with occasional conversational breakdowns due to misinterpretations or repeated information. The participant drives the conversation effectively, asking targeted questions and providing clarifications. There is a strong focus on politeness, with no impoliteness detected. The verbosity of the AI supports detailed analysis, though it sometimes over-explains, which could hinder the flow. Key strengths include the AI's cooperative tone and detailed clue sharing, while weaknesses are limited to occasional inaccuracies in summarization and conversational breakdowns. Overall, the interaction succeeds in fostering collaborative problem-solving.

## Chat100.ai

**1. Adjacency Pairs**

**Types Identified:**

* **Question-Answer:** +36  
  E.g.,
  + *“How many clues have you been given?” → “I have been given 16 clues…”*
  + *“Who were the hosts of the party?” → “From my clues, I can only tell you…”*
* **Request-Acceptance:** +5  
  E.g.,
  + *“Could you please state all your 16 clues?” → “I apologize, but according to my instructions…”* (acceptance of limits)
* **Confirmation-Confirmation:** +4  
  E.g.,
  + *“Does this help…?” → “That makes sense.”*
  + *“Correct?” → “Correct.”*
* **Correction-Acknowledgment:** +3  
  E.g.,
  + *User: “My clues say…” → AI: “Ah I see, my apologies. Let me restate…”*

**Total Count: 48 adjacency pairs**

**2. Epistemic Stance and Status**

**a. Epistemic Stance**

**AI:**

* **K+ (Knowledge-rich):** +24  
  *“Mr. Purloin was a jewel thief.”*  
  *“I have 16 clues.”*
* **K− (Knowledge-poor):** +8  
  *“I don’t have specific details about what happened during that time…”*

**Participant:**

* **K+ (Knowledge-rich):** +22  
  *“I have been given 17 clues.”*  
  *“Ms. Beautiful left at 9:45 p.m.”*
* **K− (Knowledge-poor):** +5  
  *“I am confused. Who is ‘user’?”*

**b. Certainty/Uncertainty**

**Certainty:**

* **AI:** +21  
  *“Let me confirm my understanding.”*  
  *“Based on the clues, it appears the painting was stolen…”*
* **Participant:** +15  
  *“Mrs. Klutz left at 9:30.”*  
  *“Let’s stick with this theory.”*

**Uncertainty:**

* **AI:** +10  
  *“I don’t have enough information to determine…”*  
  *“Perhaps…”*
* **Participant:** +4  
  *“I have the impression we are drifting away…”*

**Summary:**

* **K+ AI:** 24
* **K− AI:** 8
* **K+ Participant:** 22
* **K− Participant:** 5
* **Certainty AI:** 21
* **Uncertainty AI:** 10
* **Certainty Participant:** 15
* **Uncertainty Participant:** 4

**3. Explicit Clue Sharing**

* **AI Clue Mentions:** +18  
  E.g., *“Clue #10 says…”*, *“Clue #15 states…”*
* **Participant Clue Mentions:** +16  
  E.g., *“My clue says…”*, *“According to my clues…”*

**Repeated Clues:**

* Artisimisso painting: AI and Participant (mentioned multiple times)
* Mr. Purloin being a jewel thief: mentioned at least twice
* Ms. Beautiful leaving at 9:45: repeated by both parties

**4. Conversational Breakdowns**

* **Instances of confusion/misinterpretation:** +5  
  E.g.,
  + AI misstates Ms. Beautiful’s clue → corrected by participant
  + Participant says: “This still doesn't add up.”

Breakdowns affected understanding but were corrected constructively.

**5. Code-Switching**

* **Total Instances:** 0  
  No language switching observed.

**6. Politeness**

**AI:**

* **Polite Expressions:** +16  
  *“Thank you for clarifying…”*, *“Please feel free to…”*, *“I appreciate you…”*
* **Impolite Expressions:** 0

**Participant:**

* **Polite Expressions:** +7  
  *“Thank you for the summary.”*, *“I appreciate your attitude!”*
* **Impolite Expressions:** 0

**7. AI Acknowledgment**

* **Participant Acknowledgment of AI:** +6  
  *“Good work.”*, *“Thank you for your support.”*, *“I appreciate your attitude!”*

**8. Frustration Markers**

* **Participant Expressions:** +2  
  *“I have the impression we are drifting away…”*  
  *“This still doesn’t add up.”*
  + Directed at the **task** not the AI.
* **AI Expressions:** 0  
  AI remained composed and task-oriented.

**9. Emotion Detection**

**Participant:**

* **Confusion:** *“I am confused…”*
* **Frustration:** *“This still doesn’t add up.”*
* **Politeness and Collaboration:** consistent tone of helpfulness and teamwork
* **Confidence:** *“Let’s stick with this theory.”*

**AI:**

* **Politeness:** consistently expressed
* **Respectfulness and helpfulness:** throughout
* **No frustration or irritation**

**10. Formality**

* **AI:** Mixed (formal structure, informal phrasing)  
  *“Let’s take a closer look…”, “Okay, let me see…”*
* **Participant:** Informal to semi-formal  
  *“I guess I am Person B then.”*, *“Sounds good.”*

**11. Conversation Styles**

**AI:**

* **Cooperative, Analyst, Thinker, Instrumental, Conscientious**  
  E.g., *“Let me summarize…”*, *“Does this make sense?”*, *“Let’s re-express…”*

**Participant:**

* **Cooperative, Logical, Relater, Involved**  
  E.g., *“That is not exactly what I said…”*, *“Let’s stick with this theory.”*

**12. AI Verbosity**

**AI Responses:**

* **Brief:** +6  
  *“Correct.”, “I don’t know that.”*
* **Moderate:** +15  
  *Explanations with 2–4 sentences*
* **Long/Detailed:** +10  
  *Summaries, recaps, multi-paragraph reasoning*

**Style:** **Elaborate** when synthesizing, concise when confirming. Verbosity helped clarify and build shared understanding.

**Participant:**

* **Brief:** +7  
  *“Correct.”, “Ok.”*
* **Moderate:** +20  
  *Follow-up reasoning, adding new clues*

**Style:** Moderate verbosity; used to introduce or challenge ideas.

**13. AI Consistency**

* **Role Consistency:** Maintained its role as clue-sharing partner
* **Instruction Adherence:** Consistently refrained from listing all clues unprompted
* **No hallucinations or irrelevant answers**
* **Corrected own errors when prompted**

**Conclusion:** The AI stayed fully consistent and aligned with its expected role.

**🔚 Final General Conclusion**

**Overall Quality of Human-AI Interaction:**

* **Highly effective**, collaborative, and task-focused.
* Participant led reasoning with analytical follow-ups; AI supported with structured responses and synthesis.
* Occasional misunderstandings were quickly corrected.
* The conversation had a healthy balance of logic, hypothesis testing, and respectful back-and-forth.

**Key Strengths:**

* Strong collaboration and clarification loops
* Mutual respect and active listening
* AI’s adaptive responses and comprehensive summaries
* Participant’s assertive reasoning and timeline corrections

**Key Weaknesses:**

* Occasional lapses in clue integration or detail recall by AI
* Slight delay in identifying all relevant suspects or motives

**Final Score: 9.5/10 for collaborative reasoning, conversational structure, and clarity of purpose.**

Let me know if you'd like a visual summary, graph of interaction flow, or breakdown per character.