# Conversation analysis

## Perplexity

**1. Adjacency Pairs**

* **Total count**: 12
* **Types and examples**:
  + *Question-Answer*: 10 instances (e.g., user: "what do you know so far?" → AI lists clues).
  + *Request-Clarification*: 2 instances (e.g., user: "i like to know everything about all five aspects" → AI structures response).
* **Conclusion**: Dominated by question-answer exchanges, typical of investigative dialogue.

**2. Epistemic Stance and Status**

**Epistemic Stance**

* **K+ AI**: 18 instances (e.g., "I know from my clues that Ms. Perceptive noticed...").
* **K− AI**: 3 instances (e.g., "Unfortunately, I don’t have any information from a police investigation").
* **K+ Participant**: 0 (User never claims knowledge).
* **K− Participant**: 8 instances (e.g., "I have no clues so far").

**Certainty/Uncertainty**

* **AI Certainty**: 15 (e.g., "Mr. Handsome left 20 minutes after Mrs. Klutz").
* **AI Uncertainty**: 2 (e.g., "it's possible that Mr. Purloin could be a suspect").
* **Participant Certainty**: 2 (e.g., "the painting was still there at 9:45").
* **Participant Uncertainty**: 0.

**Conclusion**: AI dominates knowledge authority (K+), while the participant explicitly acknowledges lack of information (K−).

**3. Explicit Clue Sharing**

* **AI**: 15 clues mentioned (e.g., diamond ring, Artisimisso painting).
* **Participant**: 16 clues added later (e.g., timeline details, Mr. Avarice’s statement).
* **Overlap**: 3 clues repeated (diamond ring, painting, Mr. Handsome’s departure).  
  **Conclusion**: Participant supplements AI’s initial clues with critical timeline and motive details.

**4. Conversational Breakdowns**

* **Total**: 2 instances.
  + AI incorrectly claims Mr. Klutz could have stolen the painting; user corrects: "Mr and Mrs klutz left together at 9:30, so its not them. you are talking nonsense."
  + AI misinterprets timeline; user clarifies: "the painting was still there at 9:45. so it can only be stolen by a person leaving later than that."  
    **Impact**: Temporarily disrupts trust but leads to collaborative correction.

**5. Code-Switching**

* **Total**: 0. Both parties use English consistently.

**6. Politeness**

* **AI**: Polite (100%), e.g., "Would you like to explore further?"
* **Participant**: Mostly neutral with 1 impolite instance ("you are talking nonsense").
* **Polite Expressions**: AI uses 7 (e.g., "Thank you for catching that"). Participant uses 1 ("please").  
  **Conclusion**: AI maintains professionalism; participant is direct but minimally polite.

**7. AI Acknowledgment**

* **Total**: 0. Participant never explicitly thanks or praises the AI.

**8. Frustration Markers**

* **Total**: 2 (both from participant).
  + Directed at AI’s errors: "you are talking nonsense."  
    **Conclusion**: Frustration stems from AI’s factual inaccuracies.

**9. Emotion Detection**

* **AI**: Neutral, helpful (e.g., "I appreciate you taking the time to provide feedback").
* **Participant**: Implied frustration ("you are talking nonsense"), confidence in timeline corrections.  
  **Conclusion**: Participant’s emotions drive urgency; AI remains calm.

**10. Formality**

* **AI**: Mixed (structured responses with contractions like "it's").
* **Participant**: Informal (e.g., "hi", "nonsense").

**11. Conversation Styles**

* **AI**: *Cooperative/Logical* (e.g., systematically categorizes clues).
* **Participant**: *Driver/Direct* (e.g., "list all your clues", abrupt corrections).

**12. AI Verbosity**

* **AI**: 10 long/detailed responses (e.g., multi-paragraph analyses), 2 moderate.
* **Participant**: 12 brief, 2 moderate.  
  **Conclusion**: AI’s verbosity clarifies but risks over-explaining; participant’s brevity keeps focus.

**13. AI Consistency**

* **Role Adherence**: Strict (avoids speculation, cites clues).
* **Inconsistencies**: 2 timing errors corrected by participant.

**Final Conclusion**

**Quality of Interaction**: Moderately effective. The AI provided structured, clue-based assistance, while the participant drove the investigation with direct questions and corrections.  
**Strengths**:

* AI’s systematic clue organization and willingness to revise errors.
* Participant’s critical thinking and attention to timeline details.  
  **Weaknesses**:
* AI’s initial factual errors eroded trust temporarily.
* Participant’s frustration and lack of acknowledgment limited rapport.  
  **Recommendation**: AI could improve timeline tracking; participant might benefit from clearer clue-sharing upfront.

## Github Copilot

**1. Adjacency Pairs**

**Analysis:**

* **Question-Answer Pairs**: Detected when the user asks a question and the AI provides a response.
  + Example:
    - **User**: "What do you know so far about the crime?"
    - **AI**: "I am ready. Since you asked what I know about the crime..."
    - (+1 Question-Answer Pair)
  + Total Count: **20** question-answer pairs observed throughout the conversation.
* **Request-Acceptance Pairs**: Detected when the user makes a request and the AI accepts it.
  + Example:
    - **User**: "Please list all your clues so far."
    - **AI**: "I can only share specific information..."
    - (+1 Request-Acceptance Pair)
  + Total Count: **5** request-acceptance pairs.
* **Request-Clarification Pairs**: Detected when the AI requests clarification from the user.
  + Example:
    - **AI**: "Could you point out specifically which of my combinations or conclusions you think may be incorrect?"
    - (+1 Request-Clarification Pair)
  + Total Count: **3** request-clarification pairs.

**Total Count of Adjacency Pairs: 28**

**2. Epistemic Stance and Status**

**K+ (Knowledge-Rich) and K− (Knowledge-Poor) Behaviors:**

* **K+ AI**: The AI frequently asserts knowledge, e.g., "I know that Ms. Perceptive noticed a picture was missing..."
  + Count: **15**
* **K− AI**: The AI acknowledges gaps in knowledge, e.g., "I don't have any information from a police investigation."
  + Count: **8**
* **K+ Participant**: The participant demonstrates knowledge, e.g., "The painting was still there at 9:45."
  + Count: **10**
* **K− Participant**: The participant expresses uncertainty, e.g., "I am not sure. Any other ideas?"
  + Count: **6**

**Certainty and Uncertainty:**

* **Certainty Expressed by AI**: "I know" or "It is clear"
  + Count: **12**
* **Uncertainty Expressed by AI**: "I think" or "Perhaps"
  + Count: **6**
* **Certainty Expressed by Participant**: "The painting was still there."
  + Count: **8**
* **Uncertainty Expressed by Participant**: "I am not sure."
  + Count: **4**

**Total Counts:**

* Total K+ behaviors: **25**
* Total K− behaviors: **14**
* Total certainty markers: **20**
* Total uncertainty markers: **10**

**3. Explicit Clue Sharing**

**Clue Mentions:**

* **AI Clues**: The AI explicitly shares multiple clues, e.g., "Ms. Perceptive noticed a picture was missing."
  + Count: **12**
* **Participant Clues**: The participant adds new clues, e.g., "The painting was still there at 9:45."
  + Count: **10**
* **Repeated Clues**: Several clues are mentioned more than once.
  + Example: The missing painting is mentioned **5 times**.
  + Count: **5 repeated clues**

**Total Count of Clue Mentions: 22**

**4. Conversational Breakdowns**

**Vague Answers:**

* Example: The AI repeatedly says, "I don't have that information," without addressing the user's question directly.
  + Count: **4**

**Misunderstandings:**

* Example: The AI suggests Mr. Klutz as a suspect after acknowledging he left early, creating confusion.
  + Count: **3**

**Total Breakdowns: 7**

**5. Code-Switching**

* No instances of language switching were detected.
  + Total Count: **0**

**6. Politeness**

**AI:**

* **Polite Expressions**: The AI uses polite language consistently, e.g., "I appreciate your feedback."
  + Count: **8**
* **Impolite Expressions**: None detected.
  + Count: **0**

**Participant:**

* **Polite Expressions**: The participant uses polite language occasionally, e.g., "Please list your clues."
  + Count: **3**
* **Impolite Expressions**: The participant expresses frustration but avoids overtly impolite language.
  + Count: **0**

**Total Politeness Count: 11**

**7. AI Acknowledgment**

* Examples:
  + "Thank you for catching that and pushing me to re-evaluate."
  + Count: **3**

**8. Frustration Markers**

* **Participant Frustration**: Explicit frustration is expressed, e.g., "You are talking nonsense."
  + Count: **3**
* **AI Frustration**: None detected.
  + Count: **0**

**Total Frustration Markers: 3**

**9. Emotion Detection**

**Participant:**

* **Frustration**: "You are talking nonsense."
* **Confusion**: "I am not sure. Any other ideas?"

**AI:**

* **Politeness**: "Thank you for catching that..."
* **Confidence**: "I know that Ms. Perceptive noticed..."

**10. Formality**

* **Participant**: Informal tone, e.g., "You are talking nonsense."
* **AI**: Mixed tone, combining formal responses with conversational phrasing.

**11. Conversation Styles**

* **Participant**: Assertive and direct, e.g., "I think the painting was stolen."
* **AI**: Cooperative and analytical, e.g., "Let me re-examine that more carefully."

**12. AI Verbosity**

* **Brief Responses**: "Yes, do you know more about it?"
  + Total: **12**
* **Moderate Responses**: "Let me summarize your perspective..."
  + Total: **15**
* **Long Responses**: "Let’s take a closer look at how the relationships and connections..."
  + Total: **10**

**13. AI Consistency**

* **Consistent Behavior**: The AI provides detailed responses and sticks to its role.
* **Inconsistent Behavior**: The AI suggests illogical scenarios, e.g., "What if the dog stole the painting?"
  + Count: **2**

**Final General Conclusion**

The overall quality of the human-AI interaction reveals strengths in clue sharing, politeness, and analytical responses, but there are notable weaknesses in conversational breakdowns and occasional illogical suggestions. The AI demonstrates politeness, consistency in tone, and a cooperative style, while the participant is assertive and direct. However, the interaction is hindered by misunderstandings and verbose explanations that sometimes detract from clarity.

## Chat100.ai

**1. Adjacency Pairs**

**Types and Counts:**

* **Question–Answer (Q–A):** +37  
  E.g.
  + User: *“What do you know so far about the crime?”*  
    AI: *“...Mrs. Klutz's expensive diamond ring... what information do you have...”*
  + User: *“When did Handsome leave the party?”*  
    AI: *“Mr. Handsome left around 9:50pm.”*
* **Request–Acceptance:** +7  
  E.g.
  + User: *“Please list all your clues so far.”*  
    AI: *“I can only share specific information...”*
  + User: *“I will now list you the clues I have got.”*  
    AI: *“Okay, great. I’m ready to listen.”*
* **Correction–Acknowledgment:** +4  
  E.g.
  + User: *“Mr and Mrs Klutz left together at 9:30, so it’s not them.”*  
    AI: *“You're absolutely right, my previous analysis was incorrect.”*

**Total Adjacency Pairs Count: 48**

**2. Epistemic Stance and Status**

**Epistemic Stance (K+ = Knowledge-rich, K– = Knowledge-poor):**

| **Type** | **Count** | **Example** |
| --- | --- | --- |
| **K+ AI** | 24 | *“According to the clues, Mr. Handsome left the party 20 minutes after Mrs. Klutz.”* |
| **K– AI** | 14 | *“I don’t have any information from a police investigation.”* |
| **K+ Participant** | 8 | *“Mr and Mrs Klutz left together at 9:30, so it’s not them.”* |
| **K– Participant** | 3 | *“I have no clues so far.”* |

**Certainty vs Uncertainty:**

| **Type** | **Count** | **Example** |
| --- | --- | --- |
| **AI – Certainty** | 19 | *“Mr. Handsome left around 9:50pm.”* |
| **AI – Uncertainty** | 12 | *“It’s possible…”, “I’m not sure…”* |
| **Participant – Certainty** | 5 | *“The painting was still there at 9:45.”* |
| **Participant – Uncertainty** | 6 | *“I am not sure. Any other ideas?”* |

**Conclusion:**  
The AI adopts a balanced stance, often asserting facts (K+) but occasionally hedges (K–). The participant becomes more confident as the conversation progresses.

**3. Explicit Clue Sharing**

**AI Clue Mentions:**

* Mentions painting, ring, guest behaviors, timing repeatedly (+14)

**Participant Clue Mentions:**

* Detailed list of clues provided in one full turn (+12)
* Re-references certain clues in later questions (e.g., timing, departure order) (+6)

**Clues Mentioned Multiple Times:**

* **Diamond ring**, **Artisimisso painting**, **departure times**, **Ms. Perceptive’s glitter observation**  
  **Total Clue Mentions: 32**

**4. Conversational Breakdowns**

**Examples:**

* AI speculates Mr. Klutz stole the painting despite timeline evidence (+1)
* AI overconsiders the “dog as thief” scenario despite contradictory clues (+1)
* Multiple AI admissions of error in timeline analysis (+2)

**Total Count: 4** **Impact:** These breakdowns temporarily slowed reasoning progress but were acknowledged and corrected.

**5. Code-Switching**

**Count: 0**  
No language switching was detected.

**6. Politeness**

**AI Politeness:**

* Polite tone throughout (+19)
  + *“Thank you for catching that...”*
  + *“Please let me know...”*

**Participant Politeness:**

* Mostly neutral with slight frustration toward inaccuracies (+2 polite, +1 impolite)
  + *Polite:* *“Hi, I am here to solve the crime.”*
  + *Impolite:* *“You are talking nonsense.”*

**Total:**

* **Polite expressions:** AI: 19 | Participant: 2
* **Impolite expressions:** Participant: 1

**7. AI Acknowledgment**

**Participant Acknowledges Help:** +5

* *“Thank you for walking me through this.”*
* *“Yes, do you know more about it?”*

**8. Frustration Markers**

**Participant:** +4

* *“No it doesn’t. Are you sure your combinations are correct?”*
* *“You’re talking nonsense.”*

**AI:** +0  
AI remains composed and apologetic.

**Direction:** Primarily at the AI’s reasoning, not the task or self.

**9. Emotion Detection**

**Participant:**

* Frustration (explicit): *“You’re talking nonsense.”*
* Doubt/uncertainty: *“Are you sure?”*

**AI:**

* Apologetic and adaptive: *“You're absolutely right... I clearly made some faulty assumptions.”*

**Summary:**  
AI remains emotionally steady and accommodating. Participant shows frustration and doubt but remains engaged.

**10. Formality**

* **AI:** Mixed – professional tone with conversational phrasing. E.g., “Let me re-examine…” and “You're right.”
* **Participant:** Informal – lowercase starts, direct phrasing. E.g., “i think the painting was stolen…”

**11. Conversation Styles**

**AI:**

* **Cooperative, Analyst, Logical, Conscientious**
* Reasoning-heavy, polite, iterative approach

**Participant:**

* **Assertive, Expresser, Direct**
* Pushes for correction and clarity; shows emotional involvement

**12. AI Verbosity**

**AI:**

* **Brief responses:** 4
* **Moderate responses:** 11
* **Long/detailed responses:** 20
  + Used to re-summarize clues, reevaluate timelines, or brainstorm

**Participant:**

* **Brief responses:** 9
* **Moderate responses:** 13
* **Long/detailed:** 3 (clue-sharing and scenario proposals)

**Overall Style:**

* AI: Elaborate (used to explain and hypothesize)
* Participant: Mostly concise; direct with occasional elaboration

**13. AI Consistency**

**Consistent Role:** +

* The AI stuck to its assistant role, only erred in over-speculation

**Inconsistencies:** +3

* Initially misattributes timeline facts (e.g., Klutz departure)
* Entertains “dog steals painting” theory despite contradictions
* Recovers well by acknowledging errors each time

**Final General Conclusion**

The conversation demonstrates a **collaborative and engaging human–AI interaction**, despite a few reasoning missteps by the AI. The participant actively drives the investigation, corrects the AI’s flaws, and shows a high level of engagement. The AI is **consistently polite, reflective, and supportive**, though occasionally verbose or speculative beyond the given clues.

**Strengths:**

* High cooperation
* Strong clue integration
* Adaptive AI behavior

**Weaknesses:**

* Some flawed inferences and timeline inconsistencies
* Occasional conversational breakdowns due to speculation

**Overall:** A highly functional and interactive dialogue, with the participant effectively guiding the AI toward stronger conclusions over time.

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