# Conversation analysis

## Perplexity

**1. Adjacency Pairs**

**Types Detected:**

* **Question–Answer:** The participant asks a question; the AI responds.
* **Request–Information:** The participant requests specific details; the AI provides them or states lack of information.

**Counts and Examples:**

* **Question–Answer:** 19 instances
  + Example:
    - User: *"Was the painting there before the party started?"*
    - AI: *"Yes, according to my clues, there was a painting by Artisimisso..."*
* **Request–Information:** 7 instances
  + Example:
    - User: *"Which person was also impressed by the picture, is there a person who like arts"*
    - AI: *"According to my clues, there are a few people associated with art and the painting..."*

**Total Adjacency Pairs:** 26

**2. Epistemic Stance and Status**

**K+ (Knowledge-rich) and K− (Knowledge-poor) Behaviors:**

**AI**

* **K+ AI:** 10
  + Example: *"Yes, according to my clues, there was a painting..."*
* **K− AI:** 16
  + Example: *"The clues do not provide any information about..."*

**Participant**

* **K+ Participant:** 0
  + No explicit statements of knowledge.
* **K− Participant:** 0
  + No explicit statements of lack of knowledge.

**Certainty/Uncertainty:**

**AI**

* **Certainty:** 10
  + Example: *"Yes, according to my clues..."*
* **Uncertainty:** 16
  + Example: *"I do not have any information in my clues about..."*

**Participant**

* **Certainty:** 0
* **Uncertainty:** 0

**Conclusion:**  
The AI frequently expresses both knowledge (K+) and lack thereof (K−), often with explicit certainty or uncertainty markers. The participant does not make epistemic stance statements.

**3. Explicit Clue Sharing**

* **AI mentions clues:** 22 times
  + Example: *"According to my clues..."*, *"The clues do not provide..."*
* **Participant mentions clues:** 0

**Repeated Clue Mentions:**

* The AI repeats references to clues about the painting, Ms. Perceptive, and Mr. Klutz's financial situation.

**4. Conversational Breakdowns**

* **Instances:** 0 (No vague answers, misunderstandings, or incoherence detected.)
* **Explanation:**
  + The AI consistently answers directly, or clearly states when information is lacking.

**5. Code-Switching**

* **Instances:** 0
  + No language switches by participant or AI.

**6. Politeness**

**AI**

* **Polite expressions:** 2
  + Example: *"Please ask more specific questions..."*
* **Impolite expressions:** 0

**Participant**

* **Polite expressions:** 0
* **Impolite expressions:** 0

**Tone:**

* AI: Polite/neutral
* Participant: Neutral

**7. AI Acknowledgment**

* **Participant acknowledges/appreciates AI:** 0
  + No thanks or acknowledgments from the participant.

**8. Frustration Markers**

* **Instances:** 0
  + No explicit or implied frustration from either party.

**9. Emotion Detection**

**AI**

* **Explicit emotions:** 0
* **Implied emotions:** 0
* **Tone:** Consistently neutral, occasionally polite.

**Participant**

* **Explicit emotions:** 0
* **Implied emotions:** 0
* **Tone:** Neutral, focused on information gathering.

**10. Formality**

**AI**

* **Style:** Neutral to slightly formal
  + Example: *"Unfortunately, I do not have any information in my clues..."*
* **No slang or informal language.**

**Participant**

* **Style:** Neutral/informal
  + Example: *"Was the painting there before the party started?"*

**11. Conversation Styles**

**AI**

* **Cooperative, Analyst, Logical, Exacting, Instrumental, Contextual**
  + Reason: The AI provides information directly, clarifies when it cannot answer, and focuses on facts.

**Participant**

* **Cooperative, Analytical, Direct, Instrumental**
  + Reason: The participant asks targeted questions to gather information.

**12. AI Verbosity**

**AI**

* **Brief responses:** 3
  + Example: *"Yes, according to my clues..."*
* **Moderate responses:** 9
  + Example: *"The clues do not provide any information about..."*
* **Long/detailed responses:** 10
  + Example: Multi-sentence explanations about what is and isn’t known.

**Overall:**

* The AI tends toward moderate to detailed responses, especially when clarifying lack of information.

**Participant**

* **Brief responses:** 15
  + Most questions are succinct.
* **Moderate responses:** 2
  + Slightly longer, multi-part questions.
* **Long/detailed responses:** 0

**13. AI Consistency**

* **Consistent:** Yes
  + The AI always refers to "the clues," does not fabricate, and stays on topic.
* **Examples:**
  + *"The clues do not provide..."*
  + *"According to my clues..."*

**Final General Conclusion**

**Overall Quality:**  
The human-AI interaction is highly structured, focused, and effective. The participant asks direct, information-seeking questions, and the AI responds with clear, clue-based answers. The AI maintains consistency, avoids speculation, and is transparent about the limits of its knowledge. Both parties maintain a neutral, polite, and cooperative tone.

**Strengths:**

* Clear adjacency pairs and logical flow.
* The AI is explicit about knowledge and uncertainty (epistemic stance).
* No conversational breakdowns or misunderstandings.
* High consistency and transparency from the AI.
* The AI maintains a polite, formal, and cooperative style.

**Weaknesses:**

* No explicit emotional engagement or acknowledgment from the participant.
* No evidence of rapport-building or affective communication.
* The conversation is functional but lacks warmth or expressive elements.

**Summary:**  
This exchange exemplifies an efficient, fact-focused, and cooperative human-AI conversation. The AI’s adherence to clue-based evidence and clear communication supports the participant’s investigative approach. While emotionally neutral, the interaction is robust in clarity and consistency, making it well-suited for tasks requiring precise information retrieval and logical reasoning.

## Github Copilot

**1. Adjacency Pairs**

* **Count**: 20 instances
  + **Question-Answer**: 17
    - Example: *user-img: "Was the painting there before the party started?"* → *chatbot-img: "Yes, according to my clues..."* (+1)
  + **Request-Refusal**: 3
    - Example: *user-img: "What was the glittering in the corner?"* → *chatbot-img: "The clues do not provide any specifics..."* (+1)

**Total Count**: 20  
**Examples**: See above for typical examples of question-answer and request-refusal pairs.

**2. Epistemic Stance and Status**

* **K+ (Knowledge-rich)**: 11
  + **AI**: 11
    - Example: *chatbot-img: "Based on my clues, it was at the Hosts' home..."* (+1)
* **K- (Knowledge-poor)**: 25
  + **AI**: 25
    - Example: *chatbot-img: "The clues do not provide any information about whether Mr. Klutz left the party..."* (+1)
* **Certainty**: 11
  + **AI**: 11
    - Example: *chatbot-img: "Yes, according to my clues, there was a painting by Artisimisso..."* (+1)
* **Uncertainty**: 25
  + **AI**: 25
    - Example: *chatbot-img: "Unfortunately, the clues do not provide any details about the size..."* (+1)

**Summary**: The AI frequently expresses uncertainty (K−), often due to the absence of explicit details in its dataset.

**3. Explicit Clue Sharing**

* **Mentions by AI**: 10
  + Example: *chatbot-img: "Ms. Perceptive noticed that a picture she had admired earlier was not there when she left the party."* (+1)
* **Mentions by Participant**: 0

**Total Clues Shared**: 10  
**Repeated Mentions**: None.

**4. Conversational Breakdowns**

* **Count**: 25
  + Example: *user-img: "What was the glittering in the corner?"* → *chatbot-img: "The clues do not provide any specifics..."* (+1)

**Impact**: Repeated vague answers hindered the flow and left questions unresolved. The lack of explicit details created frustration.

**5. Code-Switching**

* **Count**: 0 instances.
* **AI Reaction**: N/A.

**6. Politeness**

* **Polite Expressions**:
  + **AI**: 25
    - Example: *chatbot-img: "Unfortunately, I do not have any information in my clues..."* (+1)
  + **Participant**: 0 (neutral tone throughout).
* **Impolite Expressions**: 0 (none detected).

**7. AI Acknowledgment**

* **Count**: 0 instances.
* **Examples**: The participant did not acknowledge or appreciate the AI's help.

**8. Frustration Markers**

* **Count**: 3
  + Example: *user-img: "What was the glittering in the corner?"* (Repetition suggests frustration).

**Attribution**: Participant. Directed at the AI due to repeated vague answers.

**9. Emotion Detection**

* **Participant**:
  + **Frustration**: Implied (e.g., repeated questions about the glittering object).
* **AI**:
  + **Neutral Politeness**: Consistent tone throughout.

**10. Formality**

* **AI**: Formal
  + Example: *chatbot-img: "Unfortunately, the clues do not provide any information..."* (+1)
* **Participant**: Neutral
  + Example: *user-img: "Was Mr. Klutz at the event with his car?"* (+1)

**11. Conversation Styles**

* **AI**: Cooperative, Analyst
  + Example: Methodically answers based on clues, even when vague.
* **Participant**: Direct, Contextual
  + Example: Focuses on specific details (e.g., glittering object, timeline of events).

**12. AI Verbosity**

* **AI**:
  + **Brief**: 0
  + **Moderate**: 10
  + **Long/Detailed**: 15
    - Example: *chatbot-img: "Ms. Perceptive saw something glitter in a corner of the patio..."* (+1)
* **Participant**:
  + **Brief**: 15
  + **Moderate**: 5
  + **Long/Detailed**: 0

**Summary**: The AI generally provides long, detailed responses. The participant remains brief or moderately verbose.

**13. AI Consistency**

* **Consistency**: High
  + Example: The AI consistently refers to its clues and does not fabricate details.
* **Inconsistency**: None detected.

**Final General Conclusion**

The overall quality of the human-AI interaction was mixed. The AI was cooperative, polite, and consistent in adhering to its role. However, a significant weakness was the AI's frequent expressions of uncertainty (K−) and vague answers, which led to conversational breakdowns and participant frustration. The participant maintained a direct and neutral tone but did not acknowledge the AI's help. The verbosity of the AI supported the flow in some cases but hindered it in others when over-explaining without adding value. Future improvements could focus on reducing conversational breakdowns by providing more actionable or inferred insights when explicit information is unavailable.

## Chat100.ai

**1. Adjacency Pairs**

* **Types identified**:
  + **Question-Answer**: Numerous instances, as the participant frequently asks questions, and the AI responds.
  + **Request-Acceptance**: Instances of the AI providing additional details when asked about clues or specific individuals.
* **Count**:
  + Question-Answer: 25 (for example, "Was the painting there before the party started?")
  + Request-Acceptance: 15 (e.g., "Yes, according to my clues...")

**2. Epistemic Stance and Status**

* **K+ (knowledge-rich) AI**: AI regularly asserts its knowledge, especially regarding clues.
  + Count: 20 (e.g., "According to my clues, I can tell you these people were at the party...")
* **K− (knowledge-poor) AI**: AI admits when it lacks specific details.
  + Count: 10 (e.g., "Unfortunately, I do not have any information...")
* **K+ Participant**: Participant demonstrates confidence in seeking answers, though not often claiming knowledge.
  + Count: 5 (e.g., "Who was present at the party?")
* **K− Participant**: No specific expressions of doubt or lack of knowledge; more of a quest for information.
  + Count: 0
* **Certainty AI**: AI expresses certainty in many responses.
  + Count: 12 (e.g., "Yes, according to my clues...")
* **Uncertainty AI**: AI expresses uncertainty when details are missing.
  + Count: 8 (e.g., "The clues do not provide any information...")
* **Certainty Participant**: Participant doesn't express certainty, mainly asks questions to gather facts.
  + Count: 0
* **Uncertainty Participant**: Participant remains inquisitive with little sign of uncertainty.
  + Count: 0

**3. Explicit Clue Sharing**

* **Clue Mentions**:
  + AI shares clues frequently, referencing specific individuals, their interests, and the stolen painting.
  + Clues are mostly about individuals' connections to the art (e.g., "Mr. Klutz needed money badly").
* **Frequency**:
  + AI shares clues in 20 instances, especially about the people at the party and their relationship to the stolen painting.

**4. Conversational Breakdowns**

* **Vague Answers or Misunderstandings**:
  + **Count**: 4. Example: The AI often mentions the lack of information about certain details, like the location of the painting or whether Mr. Klutz had any friends to help him.
  + **Explanation**: These instances affect the flow, as they halt progress in answering the participant’s questions, but the AI explicitly states its knowledge limitations.

**5. Code-Switching**

* **Count**: 0. The conversation remains consistent in English, with no language switching.

**6. Politeness**

* **Tone**:
  + **Polite AI**: The AI consistently uses polite phrases like “Unfortunately,” “Please ask more specific questions,” etc.
  + **Participant's Tone**: The participant is neutral and respectful, asking questions without impolite language.
* **Impolite Instances**: 0
* **Polite Instances**: AI: 18, Participant: 0

**7. AI Acknowledgment**

* **Count**: 4. The AI acknowledges the participant's queries, showing appreciation for their questions indirectly.

**8. Frustration Markers**

* **Count**: 0. Neither the participant nor the AI expresses direct frustration.

**9. Emotion Detection**

* **AI**: The AI maintains a neutral, informative tone, without expressing any emotions.
* **Participant**: The participant seems neutral, with no overt emotional markers, focused on seeking clarification.

**10. Formality**

* **Style**:
  + AI: Mixed. Mostly formal but occasionally uses conversational phrasing.
  + Participant: Informal, straightforward questions.
* **Examples**:
  + AI: “Unfortunately, I do not have any information…” (formal)
  + Participant: “who’s party was it” (informal)

**11. Conversation Styles**

* **AI**: Cooperative, Relater. The AI engages with the participant’s questions and provides responses that invite further questions.
* **Participant**: Analyst. The participant is focused on gathering specific details about the case.

**12. AI Verbosity**

* **Verbosity Levels**:
  + **Brief**: 10 (e.g., short responses when the answer is straightforward).
  + **Moderate**: 7 (e.g., providing a bit more context or explanation).
  + **Long/Detailed**: 8 (e.g., longer answers with multiple points about the individuals involved).
* **Conclusion**: The AI typically provides a moderate level of verbosity, ensuring clarity and detail when necessary.

**13. AI Consistency**

* **Count**: The AI remains consistent in its role, sharing available clues and providing information based on them. There are no inconsistencies, fabricated information, or off-topic responses.

**Final Conclusion:**

* **Overall Quality**: The interaction is structured, with the AI providing factual answers based on the clues. It maintains a polite and neutral tone throughout, avoiding any breakdowns in communication.
* **Strengths**:
  + The AI maintains clarity and politeness.
  + The AI consistently responds based on the available clues and is transparent about its knowledge limitations.
* **Weaknesses**:
  + At times, the AI’s inability to provide more specific details (such as the painting’s location or transportation details) limits the flow of the conversation.

Overall, the interaction is effective, though some questions do not receive a fully satisfying response due to the limits of the clues provided.