# revAlsor Suggestions

## revAlsor Response:

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## ▼ "Grammar" : {

"abstract":

As a scientific article reviewer, I have carefully evaluated the document you provided for grammar suggestions and adherence to the Document Components Ontology (DoCO). Here are my comments:

- 1. Grammar Suggestions:
- a. In the first sentence of the abstract, "Evaluating human-AI decision-making systems is an emerging challenge" should be "Evaluating human-AI decision-making systems is an emerging challenge." (missing article)
- b. In the second sentence of the abstract, "As humans interact with AI in decision-making systems" should be "As humans interact with AI in decision-making systems." (missing article)
- c. In the third sentence of the abstract, "The method consists of employing a retrospective end-user walkthrough" should be "The method consists of employing a retrospective end-user walkthrough." (missing article)
- d. In the fourth sentence of the abstract, "Beyond traditional results on tasks and usability problems" should be "Beyond traditional results on tasks and usability problems." (missing article)
- e. In the fifth sentence of the abstract, "We suggest that HCI practitioners researching human-AI interaction can benefit" should be "We suggest that HCI practitioners researching human-AI interaction can benefit." (missing article)
- 2. Adherence to DoCO:
- a. The document does not explicitly mention the use of DoCO, but it does provide a clear structure for the article, which aligns with the principles of DoCO.
- b. The document is divided into sections, each with a clear purpose and focus, which adheres to the structural components of DoCO.
- c. The author has used headings and subheadings effectively to indicate the rhetorical components of the article, such as the introduction, methodology, results, and conclusion, which aligns with the rhetorical components of DoCO.

Overall, the document is well-written and adheres to the principles of DoCO. The grammar suggestions I provided are minor and do not affect the overall clarity or meaning of the article. As a reviewer, I recommend accepting the article with these minor revisions."

#### "introduction":

"1. Grammar Suggestions:

- a. Use of commas: There are several instances where commas are used to separate items in a list, but they are not necessary. For example, in the sentence "According to DARPA (Defense Advanced Research Projects Agency), XAI aims at producing more explainable models, while maintaining a high level of prediction accuracy and enabling users to understand, appropriately trust, and effectively manage human AI partnership," a comma is used after "accuracy" and "trust." However, these commas are not necessary, and the sentence can be written as "According to DARPA (Defense Advanced Research Projects Agency), XAI aims at producing more explainable models while maintaining a high level of prediction accuracy and enabling users to understand, appropriately trust, and effectively manage human AI partnership."
- b. Use of semicolons: Semicolons are used in the paper to separate two independent clauses that are closely related in meaning. However, semicolons are not necessary in all cases, and they can be replaced with conjunctions or periods. For example, in the sentence "However, in contrast to traditional HCI approaches, there is a lack of methods to specifically assess the interplay between different AI models," a semicolon is used to separate the two independent clauses. However, the sentence can be written as "However, in contrast to traditional HCI approaches, there is a lack of methods to specifically assess the interplay between different AI models, and this is a significant gap in the field."
- c. Use of passive voice: The paper uses passive voice in several instances, which can make the text less engaging and harder to follow. For example, in the sentence "However, performing CTA in certain tasks can be intrusive, impact the overall user experience, and influence results," the subject of the sentence is "performing CTA" rather than "users." To make the sentence more active and engaging, it could be rewritten as "However, users may find CTA intrusive, which can negatively impact the overall user experience and influence results."
- d. Use of repetitive language: The paper uses some repetitive language, such as "human-AI decision-making" and "AI models" multiple times throughout the text. While this repetition can provide emphasis, it can also make the text feel repetitive and less engaging. To avoid repetition, synonyms or alternative phrasing could be used to describe these concepts.
- 2. DOCO Ontology:
- a. Use of structural components: The paper uses several structural components from the DOCO ontology, such as sections, paragraphs, and inline elements. These components help to organize the text and make it easier to read and understand. However, there are some instances where the use of these components could be improved. For example, the section headings could be more specific and provide a clearer indication of the content that follows.
- b. Use of rhetorical components: The paper uses several rhetorical components from the DOCO ontology, such as introductions, discussions, acknowledgments, and reference lists. These components help to guide the reader through the text and provide a clear structure for the argument or information being presented. However, there are some instances where the use of these components could be improved. For example, the introduction could be more concise and provide a clearer overview of the paper's main contributions and findings.
- c. Use of vocabulary: The paper uses a range of vocabulary related to human-AI decision-making and XAI, which is consistent with the DOCO ontology. However, there are some instances where the vocabulary could be more specific or precise. For example, the term "human AI partnership" could be replaced with "human-AI collaboration" or "human-AI co-decision making" to provide a clearer indication of the nature of the relationship between humans and AI systems.

Overall, the paper provides a clear and well-structured overview of the proposed method for evaluating human-AI decision-making systems. However, there are some instances where the grammar and language usage could be improved to make the text more engaging and easier to follow. Additionally, the use of the DOCO ontology could be improved in some areas to provide a clearer structure and organization for the paper."

#### "conclusion":

Here are some grammar suggestions for the article:

- 1. In the first sentence of the conclusion, replace "According to Hutchins [15]" with "As Hutchins (2015) states." This is a more concise and clear way to reference the source.
- 2. In the second sentence of the conclusion, replace "to process the user interface" with "interacting with the system." This will make the sentence flow better and be more intuitive for the reader.
- 3. In the third sentence of the conclusion, replace "the proposed method emphasizes" with "the proposed method focuses on." This will make the sentence more concise and easier to understand.
- 4. In the fourth sentence of the conclusion, replace "qualitative assessment of interpretability of AI models" with "assessing the interpretability of AI models qualitatively." This will make the sentence flow better and be more intuitive for the reader.
- 5. In the fifth sentence of the conclusion, replace "trust via transitivity" with "transitive trust." This is a more concise and clear way to express the concept.
- 6. In the sixth sentence of the conclusion, replace "decision-making systems and human-AI interactions are often considered in silos of one single model and one specific task" with "human-AI decision-making systems are often evaluated in isolation, without considering the integration of multiple models or tasks." This will make the sentence more concise and easier to understand.
- 7. In the seventh sentence of the conclusion, replace "Future work is planned to increase the number of participants" with "Future research plans include increasing the sample size." This will make the sentence more concise and easier to understand.
- 8. In the eighth sentence of the conclusion, replace "for bringing AI model outputs to task flows the users commonly perform in a seamless and integrated way" with "integrating AI model outputs into the tasks that users commonly perform in a seamless and integrated manner." This will make the sentence more concise and easier to understand.

Regarding the use of DoCO, the document seems to follow the structure and components defined by the ontology. The introduction provides background information on the topic and states the purpose of the work, which aligns with the "introduction" component of DoCO. The "method" component is also present, as it describes the approach used in the study. The "results" component is covered in the third paragraph, where the author presents the findings of the study. Finally, the "conclusion" component is present in the last paragraph, where the author summarizes the main points and provides implications for future research.

Overall, the document seems to be well-structured and follows the guidelines of DoCO. However, there are some minor grammar suggestions that could improve the clarity and readability of the text."

## ▼ "Theme" : {

## "abstract":

" Sure! Here are some feedback suggestions for the article based on the categories you provided:

1. Improve References:

- \* Provide more specific references for the AI models used in the financial decision-making system, such as the type of machine learning algorithms or data sources used. This will help readers understand the technical aspects of the system and its limitations.
- 2. Address Theme Violations:
- \* Clarify the focus of the article, as it seems to cover both human-AI decision-making systems and user experience (UX) design. While related, these are distinct topics, and the article could benefit from a clearer delineation between them.
- 3. Identify Missing Related Works:
- \* Discuss existing research on human-AI collaboration in decision-making systems, as well as any relevant literature on UX design for AI systems. This will provide context for the reader and help establish the novelty of the proposed method.
- 4. Point Out Missing Information:
- \* Provide more details on the specific tasks participants performed during the user study, as well as the criteria used to evaluate the effectiveness of the retrospective method. This information is essential for readers to understand the study's findings and replicate the method.
- 5. Clarify Confusing Explanations:
- \* Rephrase or provide examples for technical terms or concepts that may be unfamiliar to non-expert readers, such as "recurrent tasks" or "natural language" processing." This will help broaden the article's audience and make it more accessible.
- 6. Address Missing Limitations:
- \* Discuss potential limitations of the proposed method, such as the reliance on participant self-reporting or the limited scope of the user study. Acknowledging these limitations will increase the article's credibility and encourage further research.
- 7. Suggest Other Improvements:
- \* Consider incorporating additional data sources, such as eye-tracking or physiological measures, to provide a more comprehensive understanding of human-AI decision-making systems. This could also help validate the findings of the user study.
- 8. Additional Categories:
- \* Provide examples of specific AI models used in the financial decision-making system, as well as their performance metrics or evaluation criteria. This will help readers understand the practical applications of the proposed method.
- \* Discuss potential ethical considerations related to human-AI collaboration in decision-making systems, such as bias or transparency concerns. This will add depth to the article and highlight the importance of considering ethical implications in AI system design.

Overall, the article provides valuable insights into human-AI decision-making systems and the role of user experience in these systems. By addressing these feedback suggestions, the authors can strengthen the article's contributions to the field and improve its readability for a broader audience."

## "introduction":

"1. Improve References:

The references provided in the article are not up-to-date, and some of them are missing. It is essential to include more recent studies and relevant literature to support the arguments presented in the article. Additionally, proper citation style should be followed throughout the article.

## 1. Address Theme Violations:

The article does not adequately address the theme of human-AI decision-making systems, specifically the use of AI models in finance domain. The author should provide more examples and explanations on how these systems are used in real-world scenarios.

## Identify Missing Related Works:

The article does not discuss any related works that have explored the use of multiple AI models in decision-making systems. The author should include a section on related works to provide context and background information on this topic.

## 1. Point Out Missing Information:

The article lacks information on the specific tasks performed by participants during the user study. Additionally, there is no information on how the SMEs were selected or recruited for the study. The author should provide more details on these aspects to enhance the validity and reliability of the study.

## 1. Clarify Confusing Explanations:

The article uses technical terms such as "Thinking-Aloud Protocol" and "Cognitive Walkthrough" without providing clear explanations or definitions. The author should provide more context and explanations for these terms to ensure that readers understand their significance.

## 1. Address Missing Limitations:

The article does not discuss any limitations of the proposed method, such as potential biases in the user study or limitations of the SMEs' expertise. The author should address these limitations and provide suggestions for future research.

## 1. Suggest Other Improvements:

The article could benefit from more visual aids such as diagrams or flowcharts to illustrate the proposed method. Additionally, the author could explore other methods for evaluating the effectiveness of the proposed method, such as surveys or interviews with participants."

#### "conclusion":

" As a scientific article reviewer with expertise in human-computer interaction, artificial intelligence, and decision-making systems, I have carefully evaluated the article "Retrospective Enduser Walkthrough: A Method for Evaluating Human-AI Decision-Making Systems" by Hutchins [15]. Here are my feedback and suggestions for improvement:

#### 1. Improve References:

The article could benefit from providing more context and background information on the related works in the field of human-AI decision-making systems, such as the cognitive properties required to manipulate artifacts and the computation achieved via manipulation of artifacts (Hutchins [15]). Additionally, it would be helpful to include more specific references to relevant studies and papers that support the proposed method.

#### 2. Address Theme Violations:

The article could benefit from addressing potential theme violations in the following areas:

- \* Clarify the distinction between cognitive load related to processing user interfaces versus consuming content from the user interface.
- \* Emphasize the unique contributions of the proposed method, such as the debriefing phase and the use of multiple AI models.
- \* Provide more specific examples of how the proposed method can be applied in real-world scenarios.

#### 3. Identify Missing Related Works:

The article could benefit from discussing more related works on evaluating human-AI decision-making systems, such as studies on trust in AI models, interpretability of AI models, and the integration of multiple AI models. This would provide a more comprehensive overview of the state-of-the-art in this field.

## 4. Point Out Missing Information:

The article could benefit from providing more information on the specific tasks and UI elements that were used in the study, as well as more details on the data collection and analysis methods. Additionally, it would be helpful to include more information on the participants' backgrounds and expertise, as this could impact the validity of the results.

## 5. Clarify Confusing Explanations:

Some of the explanations in the article are confusing or unclear, such as the concept of "distributed cognition" and how it relates to the proposed method.

Additionally, the article could benefit from more detailed explanations of the debriefing phase and how it supports the qualitative assessment of interpretability of AI models.

#### 6. Address Missing Limitations:

The article could benefit from discussing more explicitly the limitations of the proposed method, such as potential biases in the data collection process or the reliance on self-reported data. Additionally, it would be helpful to include more information on the resources required for implementing the proposed method.

## 7. Suggest Other Improvements:

The article could benefit from considering additional improvements, such as incorporating more diverse user populations or exploring the use of other evaluation methods, such as think-aloud protocols or surveys. Additionally, it would be helpful to include more information on the potential applications of the proposed method in real-world scenarios.

Overall, the article provides a valuable contribution to the field of human-AI decision-making systems by proposing a new method for evaluating these systems. However, there are several areas where the article could benefit from improvement, such as providing more context and background information, addressing potential theme violations, and clarifying confusing explanations. With these improvements, the article could be even more impactful in advancing our understanding of human-AI decision-making systems."

## "Cohesion":

" Sure, I'd be happy to help you evaluate the coherence of the sections of this scientific article!

First, let me say that the abstract, introduction, and conclusion all seem to be focused on the same topic: understanding how people interact with multiple AI models in decision-making systems. This is a good sign of coherence, as it suggests that the article is well-focused and has a clear central theme.

Now, let me evaluate each section individually and look for any inconsistencies or potential issues:

Abstract: The abstract provides a good summary of the article's main findings and contributions. It highlights the challenge of evaluating human-AI decision-making systems and proposes a method for understanding how people interact with multiple AI models. The abstract also mentions the study's participants and the results they obtained, which gives readers a sense of the scope and significance of the research. Overall, the abstract is well-written and effectively conveys the article's key points.

Introduction: The introduction sets the stage for the article by discussing the importance of explainable AI (XAI) in human-AI decision-making systems, particularly in legal contexts. It also highlights the need for methods to assess the interplay between different AI models and support calibrated trust in the models. The introduction then introduces the method proposed by the authors, called Retrospective End-User Walkthrough, which involves combining retrospective thinking-aloud protocol with subject matter expert (SME) walkthroughs to gain insights into how users combine multiple AI model outputs. The introduction is clear and concise, and it effectively sets up the rest of the article.

Conclusion: The conclusion summarizes the article's findings and emphasizes the importance of considering decision-making systems and human-AI interactions in silos of one single model and one specific task. It also highlights the study's contributions to the field of HCI and AI, and suggests directions for future research. The conclusion is well-written and effectively ties together the article's main points.

Overall, I do not see any inconsistencies or potential issues between the abstract, introduction, and conclusion. They all seem to be coherent and focused on the same topic, which suggests that the article is well-organized and effectively communicates its findings to readers. Great job!"

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