Conference Paper Review

**Paper ID**: 001

**Title**: Counterfactual Explanations for Inferred Medical Treatments

**Author(s)**: Xinmiao Lin

**Reviewer's Recommendations:**

1. **Writing**
   * Minor improvement suggested
2. **Novelty**
   * Original
3. **Suitability**
   * Very related
4. **Reviewer's Expertise**
   * Knowledgeable
5. **Recommendation**
   * Accept if there is space

**Reviewer's detailed comments: strength, weakness, suggestion**

1. **Comments for the Authors:**
   1. **Strengths:**

The problem and the objective of the research have been defined very well in the paper. Likewise, the research's significance and impact have been demonstrated clearly with examples like questions on the effects of choosing one medicine over the other and returning the best treatment plan with the effects.

The ability to explain the decision made by the model is pretty novel and significant. Similarly, the results for both the experiments are clearly stated, along with discrete explanations for the obtained results. The conclusion covers the paper's major key points and summarizes the contribution and significance of the research well.

* 1. **Weakness and Suggestions**:

The title does not seem to be very appealing and descriptive of the content. It can be improved by including a few more descriptive keywords.

I found a few grammatical errors which need to be corrected. For instance, the third sentence of the abstract "tell explain." Likewise, mixing past and present tenses in consecutive sentences (second last paragraph of Introduction – The second sentence is in past tense whereas the first and the remaining sentences are in the present tense.)

The abstract misses stating the impact and significance of the research. It should be included so that the readers are encouraged to read the full paper. Also, the abstract mentions that the work delivers good experimental results, which is too general. Some qualitative or quantitative indicators should be included to prove that the results are good instead.

A sentence in the second last paragraph, "Our work is inspired from this work [4] that uses two models to provide counterfactual explanations in videos." is not very clear. Instead of using "this work [4],", a few words indicating the work is much more appropriate.

Likewise, in the related works section of the Introduction, I suggest including a very few sentences summarizing the work instead of just mentioning the works' names and citations.

1. **Comments for the Program Committee (will be kept confidential and NOT released to the authors)**

The paper has a novel idea, which can provide significant contributions and impacts in medical treatments. However, there are a few improvements to be made before it can be published.