Review of: "Assessment of COVID-19 from Features Extraction of Exhaled Breath Using Signal Processing Methods"

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Summary:

An algorithm for valid exhaled breath waveform segmentation and feature computation has been developed to identify COVID-19 infection using exhaled breath patterns. The algorithm evaluates valid exhaled breath waveforms and computes features to distinguish COVID and non-COVID conditions. The slope, activity, and intersection angle of expiration and inspiration phases show significant differences between COVID and non-COVID conditions.

Several areas require further attention and clarification:

The article provides limited information about the tools and apparatus used in the research. It is essential to include details regarding the specific tools, software, or equipment utilized to ensure the reproducibility and validity of the study. Providing this information would allow readers to better understand the experimental setup and potentially replicate the research.

The article lacks clearly stated research questions, which are essential for guiding the study and focusing on the research objectives. Clearly articulating the research questions at the outset would provide readers with a better understanding of the study's purpose and the specific problems or hypotheses being addressed. Including explicit research questions would enhance the overall clarity and structure of the article.

The dataset description in the article lacks important details that could significantly enhance its value and allow readers to evaluate the study's methodology. Specifically, information such as the dataset profile, the presence of null values, preprocessing steps, data collection methods, and measures taken to mitigate bias should be included. Providing these details would ensure a comprehensive understanding of the dataset and increase the reliability of the study's findings.

The related work section is an integral part of any research article, as it demonstrates the authors' knowledge of existing literature and highlights the unique contributions of their work. In this article, the authors did not explicitly discuss how their work compares to previous studies or how it is superior. It is important for authors to clearly articulate how their

research advances the field, whether through novel methodologies, improved results, or addressing limitations of prior work.

The discussion section of the article is relatively short and would benefit from further development. It is important to address why COVID-19 remains relevant today and why previous attempts have been insufficient in addressing the issue at hand. Expanding on these points would provide a deeper understanding of the significance and implications of the research.

Lastly, the article requires proofreading and editing to enhance clarity and improve the flow of ideas. Attention to grammar, sentence structure, and overall coherence would contribute to a more polished and professional presentation of the research.

I wish the best of luck to the authors.