A Manuscript Microscope 'Sentence Audit' of:

Evaluate effects of multiple users in collaborative Brain-Computer Interfaces: A SSVEP study

What is the Manuscript Microscope Sentence Audit?

The Manuscript Microscope Sentence Audit is a research paper introspection system that parses the text of your manuscript into minimal sentence components for faster, more accurate, enhanced proofreading.

Why use a Sentence Audit to proofread your manuscript?

- Accelerated Proofreading: Examine long technical texts in a fraction of the usual time.
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- Reliable Proofreading: Ensure every single word of your manuscript is correct.
- Easier Proofreading: Take the hardship out of crafting academic papers.

Bonus 1: Improved Productivity: Rapidly refine rough drafts to polished papers.
Bonus 2: Improved Authorship: Cultivate a clear, concise, consistent, writing style.
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Manuscript Source: https://www.biorxiv.org/content/10.1101/2021.03.05.434173v1

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Audit Date: 29/03/21 **Audit Identifier:** 1FWIS0P6MU6G5AY **Code Version:** 3.6

Features of the Sentence Audit:

The Sentence Audit combines two complementary proofreading approaches:

1. Each sentence of your text is parsed and displayed in isolation for focused inspection.
2. Each individual sentence is further parsed into Minimal Sentence Components for a deeper review of the clarity, composition and consistency of the language you used.

The Minimal Sentence Components shown are the smallest coherent elements of each sentence of your text as derived from it's conjunctions, prepositions and selected punctuation symbols (i.e. commas, semicolons, round and square brackets).

The combined approaches ensure easier, faster, more effective proofreading.

Comments and Caveats:

• The sentence parsing is achieved using a prototype natural language processing pipeline written in Python and may include occasional errors in sentence segmentation.

• Depending on the source of the input text, the Sentence Audit may contain occasional html artefacts that are parsed as sentences (E.g. "Download figure. Open in new tab").

• Always consult the original research paper as the true reference source for the text.

Contact Information:

To get a Manuscript Microscope Sentence Audit of any other research paper, simply forward any copy of the text to John.James@OxfordResearchServices.com.

All queries, feedback or suggestions are also very welcome.

Research Paper Sections:

The sections of the research paper input text parsed in this audit.

Section No.	Headings	Sentences
Section: 1	Abstract	5
Section: 2	I. Introduction	22
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title **Evaluate effects of multiple users in collaborative Brain-Computer Interfaces: A SSVEP study**

S1 [001] Abstract

S1 [002] This study investigates the effects of collaboration on task performance in brain-computer interface (BCI) based on steady-state visually evoked potential (SSVEP).

This study investigates the effects ...
... of collaboration ...
... on task performance ...
... in brain-computer interface ...
... (BCI) ...
... based ...
... on steady-state visually evoked potential ...
... (SSVEP).

S1 [003] Navigation tasks were performed in a virtual environment under two conditions, e.g., individual performance and team performance.

Navigation tasks were performed ...
... in a virtual environment ...
... under two conditions, ...
... e.g., ...
... individual performance ...
... and team performance.

S1 [004] The results showed that average task completion time in the collaborative condition is decreased by 6 percent compared with that of individual performance, which is inline with other studies in collaborative BCI (cBCI) and joint decision-making.

The results showed ...
... that average task completion time ...
... in the collaborative condition is decreased ...
... by 6 percent compared ...
... with that of individual performance, ...
... which is inline ...
... with other studies ...
... in collaborative BCI ...
... (cBCI) ...
... and joint decision-making.

S1 [005] Our work is a step forward for the progress in BCI studies that include multi-user interactions.

Our work is a step forward ...
... for the progress ...
... in BCI studies ...
... that include multi-user interactions.

S2 [006] I. Introduction

S2 [007] The phenomenon of collective decision-making attracts a lot of interest in the literature recently [1]–[3].

The phenomenon ...
... of collective decision-making attracts a lot ...
... of interest ...
... in the literature recently ...
... [1]–[3].

S2 [008] Those researches confirmed that two heads were getting better than one head in the decision-making process, in the case where free communication and interaction are possible between each other.

Those researches confirmed ...
... that two heads were getting better ...
... than one head ...
... in the decision-making process, ...
... in the case ...
... where free communication ...
... and interaction are possible ...
... between each other.

S2 [009] This mechanism is called two-heads-better-than-one (2HBT1) [3].

This mechanism is called two-heads-better-than-one ...
... (2HBT1) ...
... [3].

S2 [010] However, there are still few studies [4]–[6] focusing on the aspect of brain signal decoding.

However, ...
... there are still few studies ...
... [4]–[6] ...
... focusing ...
... on the aspect ...
... of brain signal decoding.

S2 [011] In this study, we investigate this mechanism with a brain-computer interfaces (BCI) system [7].

In this study, ...
... we investigate this mechanism ...
... with a brain-computer interfaces ...
... (BCI) ...
... system ...
... [7].

S2 [012] This work is needed because in a BCI system, typically a game, people tend to play with their teammates.

This work is needed ...
... because ...
... in a BCI system, ...
... typically a game, ...
... people tend ...
... to play ...
... with their teammates.

S2 [013] The team performance can be divided into two modes, e.g., collaborative and competitive.

The team performance can be divided ...
... into two modes, ...
... e.g., ...
... collaborative ...
... and competitive.

S2 [014] In those two modes, users might be encouraged to put more effort, engagement, and attention into the game with their teammates.

In those two modes, ...
... users ...
... might be encouraged ...
... to put more effort, ...
... engagement, ...
... and attention ...
... into the game ...
... with their teammates.

S2 [015] However, developing such system into the BCI system is still under investigation for the possibility of multiple users in BCI game.

However, ...
... developing ...
... such system ...
... into the BCI system is still ...
... under investigation ...
... for the possibility ...
... of multiple users ...
... in BCI game.

S2 [016] Furthermore, the study gives an insight into the impact of multiple users in the cBCI system [8]–[10] compare to individual performances.

Furthermore, ...
... the study gives an insight ...
... into the impact ...
... of multiple users ...
... in the cBCI system ...
... [8]–[10] ...
... compare ...
... to individual performances.

S2 [017] One of the first multi-users BCI game reported was Brainball [11].

One ...
... of the first multi-users BCI game reported was Brainball ...
... [11].

S2 [018] In this Brainball game, two users have to push a ball one against the other.

In this Brainball game, ...
... two users have ...
... to push a ball one ...
... against the other.

S2 [019] They are expected to compete by relaxing and their performance is measured by electroencephalography (EEG).

They are expected ...
... to compete ...
... by relaxing ...
... and their performance is measured ...
... by electroencephalography ...
... (EEG).

S2 [020] The most relaxed player will be the winner.

The most relaxed player will be the winner.

S2 [021] Another study relying on a similar principle can be found in BrainArena [12].

Another study relying ...
... on a similar principle can be found ...
... in BrainArena ...
... [12].

S2 [022] Motor imagery was used to steer a ball into a goal.

Motor imagery was used ...
... to steer a ball ...
... into a goal.

S2 [023] Eight EEG channels located around the right and left motor cortices were used.

Eight EEG channels located ...
... around the right ...
... and left motor cortices were used.

S2 [024] This BrainArena game can be played on an individual, collaborative or competitive mode.

This BrainArena game can be played ...
... on an individual, ...
... collaborative ...
... or competitive mode.

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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