

## INFORMED CONSENT/Information Letter

### Using Colour Patterns to Assist People with Colour Vision Deficiency

You are invited to participate in a research project. This information letter is to help you decide if you want to be involved in the project.

You are invited to take part in a research project to explore the effectiveness of using patterns in order to communicate colour information.

The purpose of this letter is to provide you with the information you require to make an informed decision on participating in this research.

### Who is conducting this research study?

This research study is being conducted by Connor Geddes (geddesc@uoguelph.ca), Masters Student; under the supervision of Dr. David Flatla (dflatla@uoguelph.ca), Associate Professor, in the School of Computer Science at the University of Guelph in Guelph, Ontario, Canada.

This research is not funded by any third party.

### Who do I contact if I have concerns or need more information?

Please feel free to contact Connor Geddes (geddesc@uoguelph.ca) with any questions you might have about the project.

Any questions about the research study may also be directed to Dr. David Flatla, Associate Professor (dflatla@uoguelph.ca).

### Are there any conflicts of interest involved?

No member of the research team has a conflict of interest related to this study.

The colour patterns used for this research may result in inventions or discoveries that could become the basis for new products or diagnostic or therapeutic agents. In some instances, these inventions and discoveries may be of potential commercial value and may be patented and licensed by the researchers/sponsor. You will not receive any money or other benefits derived from any commercial or other products that may be developed from the use of the specimen.

### What is this research study about?

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The purpose of this research is to determine suitable patterns for conveying colour information.

## Why am I being invited to participate in this research study?

You are invited to take part in this study if:

- You are an individual with colour blindness (colour vision deficiency)
- You are at least 18 years of age
- You are able to read/write in English

## What will I be asked to do?

You are invited to participate in a 15-20-minute online session that consists of:

- a pre-study questionnaire
- an orientation on three different colour identification patterns
- performing colour identification tasks (by selecting coloured squares) while unassisted and while using the three colour identification patterns
- performing colour sorting tasks (by rearranging coloured squares) while unassisted and while using the three colour identification patterns
- a post-study questionnaire

The entire study will be hosted on Google's Firebase service.

We will record your responses to the questionnaires as well as the accuracy and completion time for each trial.

We will not record any personally identifiable information.

## How long will it take?

The study session will take approximately 15-20 minutes.

## What are my responsibilities?

It is important that you keep in mind that we are evaluating our colour identification patterns – we are not evaluating you. Please try your best but keep in mind that the tasks have been made purposefully difficult. Your participation in this study is completely voluntary. If you feel you no longer wish to take part, you may quit the study at any point by closing the study browser window. Your responses and data will not be recorded if you quit prior to completion.

## Are there any risks or possible negative outcomes for me if I participate?

We don't believe there are any risks or negative outcomes from participating in this research

## What are the benefits of the research project?

- Although this research may not benefit you directly, it will help researchers understand the potential usefulness in utilizing patterns to communicate colour to people with colour vision deficiency.

## After I agree to participate and sign the Info/consent letter, can I change my mind?

- Participation in this study is voluntary, you can change your mind at any time.
- You may refuse to participate, refuse to answer any questions or withdraw from the study with no effect on your future (care/academic/employment status, etc.).
- If you choose to withdraw before study session completion, all data collected up to that point will be destroyed and not used as part of this project.
- After the completion of the study, data cannot be withdrawn as we are not collecting any personally identifiable information, so we will be unable to identify your data.

## Who will know what I said or did in the study?

- No personally identifiable information will be collected.
- Your anonymized information (type of colour blindness, session results, and questionnaire responses) will be linked to a unique participant ID number for data processing purposes. The data you provide will be associated only with this participant ID number. While the study is running, all study data will be stored on Google's Firebase service. After the study has completed, we will transfer the study data on to a University of Guelph secure file storage service, only accessible by the research team.
- Your anonymized information will be available through open access via the ACM digital library.

## How will you protect the information I provide?

- Data collected will be stored on a Google's Firebase service while the study is running and will be transferred to a University of Guelph secure file storage service after the completion of the study. The data stored on both Firebase and the secure file store service will only accessible by the research team.

## What will you use the information you collect for?

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- The data you provide will be used in our current study and may be used in future studies to answer similar research questions.
- The anonymous data collected will be shared in academic journals and conferences.

## Will I receive any incentives for my participation?

- You will not receive any incentives for participation in this study

## Will I be given new information about participation throughout the course of the project?

- If during the study session, new information becomes available that may relate to your willingness to continue to participate, this information will be provided to you by the research team

## Will the study be published or otherwise disseminated?

- The research team will undertake to publish the results of the project in a conference proceeding and peer-reviewed journal
- Each participant's anonymous data will only be associated with an anonymous participant ID. This participant ID will be associated with your responses and data.

## Will I receive information about the results of this research?

- After the paper has been accepted a version of the paper will be posted on the social media sites used for recruitment for all potential participants to read.

## What are my rights as a research participant?

- You do not waive any legal rights by agreeing to take part in this study.
- This project has been reviewed by the Research Ethics Board for compliance with federal guidelines for research involving human participants
- you have questions regarding your rights and welfare as a research participant in this study (REB#21-03-003), please contact: Director, Research Ethics; University of Guelph; reb@uoguelph.ca; (519) 824-4120 (ext. 56606).

By clicking the below "I agree" button, you are confirming that you have read and understood everything above and agree to take part in this research study. Please keep in mind that your participation is voluntary, and you may withdraw at any point by closing this study in your web-browser.

Make sure to print this page in order to keep it for your own records.