![University of Colorado Boulder]

Title of research study:

19-0023 Designing Accessible Visualization

Investigator:

Keke Wu, Emma Petersen, Danielle Szafir

Why am I being invited to take part in a research study?

We invite you to take part in a research study because we want to explore and understand the ability and preference in data interpretation for adults with cognitive disabilities, and compare those with adults without cognitive disabilities to design accessible visualization customized for this group to have effective financial data analysis. We are recruiting people with cognitive impairments, and also people without cognitive impairments.

What should I know about a research study?

- Someone will explain this research study to you.
- Whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide.

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at

If you have questions, concerns, or complaints, talk to the research team at Keke.wu@colorado.edu , Emma.Petersen@colorado.edu , Danielle.szafir@colorado.edu or by phone at 720-688-6696.

This research has been reviewed and approved by an Institutional Review Board ("IRB"). You may talk to them at (303) 735-3702 or irbadmin@colorado.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.

- You want to get information or provide input about this research.

Why is this research being done?

We are exploring new approaches to making budgetary data visualization more accessible. In this study, we will conduct experiment and you will answer questions about a series of datasets using several common visualization approaches to help us figure out what will work best for you to have effective visual analysis.

How long will the research last?

We expect that you will be in this research study for 30 – 45 minutes.

How many people will be studied?

We expect about 70 people will be in this research study.

What happens if I say yes, I want to be in this research?

If you agree to participate in this study, you will virtually meet the research team from the CU VisuaLab and the Coleman Institute for Cognitive Disabilities via Zoom. You will first need to schedule a zoom call with our team. In that call, we'll send you the study link and ask you to share your screen with us while you're finishing the experiment. We will ask you about your experiences in using data visualization and ask you to finish some visualization tasks within a given time. We will also observe and record your responses and performance when finishing the tasks. During the study, you will work with one or more people from our research team. We will record the study process using the built-in video recording feature of Zoom. You can choose whether or not to be recorded or accompanied during the experiment.

Participants must be between the ages of 21 and 60 and be comfortable using a mouse or touch screen device.

What happens if I do not want to be in this research?

You can leave the research at any time and it will not be held against you.

What happens if I say yes, but I change my mind later?

You can leave the research at any time it will not be held against you. Your decision to leave the research, will not affect your participation in future research studies. You can choose to have the data collected so far destroyed by the research team, or give us permission to retain the data we collected during your participation. Please note that because we are collecting research data in a way that is not associated with your identifying information, we may not be able to destroy all data that we have collected from you if you choose to leave the study.

What happens to the information collected for the research?

During this study, we will collect your responses to the visualization tasks. Your task performance and response time during the study will be collected and further analyzed in a password protection environment. During the study, we will also record audio and/or video of your participation and take notes of your observation and feedback through the experiment. Efforts will be made to limit the use and disclosure of your personal information, including research study records, to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization. No

identifiable information about participants will be shared in reports; direct identifiers will be removed from the data to ensure anonymity.

What else do I need to know?

You will be get compensation upon completion of the study for your time and effort.

Signature Block for Capable Adult
Your signature documents your permission to take part in this research.

_____   _____
Signature of subject   Date

_____
Printed name of subject

_____   _____
Signature of person obtaining consent   Date

                      [   ]

_____   _____
Printed name of person obtaining consent   IRB Approval Date

Signature Block for Adult Unable to Consent

Your signature documents your permission for the named subject to take part in this research.

_____
Printed name of subject

_____   _____
Signature of legally authorized representative   Date

_____
Printed name of legally authorized representative

_____   _____
Signature of person obtaining consent   Date

_____
Printed name of person obtaining consent   IRB Approval Date

Assent ❑ Obtained
❑ Not obtained because the capability of the subject is so limited that the subject cannot reasonably be consulted.