

Usability Test Script

Facilitator Checklist

- Update the Usability Recruitment spreadsheet
- Update the [option_two] flag in main.html according to the spreadsheet
- Open main.html with node index.js
- Start Zoom call
- Share screen & check if audio can be heard for participant

Introduction

Hello, and thank you for participating in this study. Today, we're exploring how people make decisions when faced with uncertain data, presented in different formats. Your feedback will help us understand the most effective ways to communicate and visualize uncertainty in information. We're interested in your thought process and how you interpret and interact with the data, rather than specific right or wrong answers.

Before we proceed, I'd like to ask for your consent to record this meeting. The recording will be used solely for analysis and coding purposes and will not be shared or used for any other reason. Do you give your permission to proceed with the recording?

Pre-test Questions

Before we begin with the prototypes, we have a few questions about your interactions with data overall.

1. How often do you make decisions based on data you receive?
 - a. *Essentially, how regularly do you turn to data as a foundation for your decisions?*
2. What is your current job role and how many years of experience do you have in data analysis, visualization, or data exploration?
3. Do you most prefer to receive information through visual, written or audio mediums?
 - a. *Can you provide some examples?*

Task Introduction

As part of this study we ask you to perform a set of tasks using two different interfaces. Both interfaces display data with varying levels of uncertainty.

On the screen, you will see two links which lead to different prototypes. As you interact with each prototype, we'd like you to think aloud, expressing your thoughts, feelings, and observations. Specifically, consider how the different information modalities represent the

uncertainty of the forecast. By modalities, we mean the various methods or channels through which information is presented – this could be visual elements, text, or speech.

When you're ready, please select the first prototype from the screen to begin. After the initial playthrough finishes, we'll ask you to complete a set of tasks and answer a few questions.

Question Topics

Decision Making Based on Combined Data

Using all available information, describe the decision you would make based on the presented data. You may interact further with the interface as you inform your decision.

- Based on the information provided, would you apply salt to the roads tonight?
 - Which features influenced or informed your decision the most? Why?
 - *How did other features of the interface affect your decision making process?*
- How clear or understandable was the information presented to you?
 - *Did you find any areas confusing?*

Passive Interface:

Please replay the forecast as many times as you need to while answering the questions.

- What would you change about this interface?
 - *What is it missing?*
 - *What is redundant information?*
- *How did you notice data uncertainty being conveyed through the interface?*
 - *Which visual elements emphasize or convey uncertainty?*
 - *Which text elements emphasize or convey uncertainty?*
 - *Which auditory elements emphasize or convey uncertainty?*

Active Interface:

Please interact with the forecast as is useful while answering the questions.

- Which visual presentation did you find most helpful for the context of the decision? Why?
- How did the interactive components of the information influence your decision?
 - *What other information would you like to see?*
- What would you change about this interface?
 - *What is it missing?*
 - *What is redundant information?*
 - *Are there other areas of the interface where you would like to see speech incorporated?*
- How did you notice data uncertainty being conveyed through the interface?
 - *Which visual elements emphasize or convey uncertainty?*
 - *Which text elements emphasize or convey uncertainty?*
 - *Which auditory elements emphasize or convey uncertainty?*

Overall Questions

1. Did you use multiple modes of information to make your decisions?
 - a. *Which, and how so?*

2. Do you see any overlap in when or where you might use these two interfaces?
3. In what contexts might the speech component be useful?
4. Are there situations where you would prefer one interface over the other?
 - a. *Why?*
 - b. *How would you describe the main differences between these interfaces in terms of when or how you'd use them?*

Conclusion

Thank you for your insights and time! Your feedback is important as we seek to better understand decision-making under uncertainty. If you have any further comments, questions, or experiences to share, please feel free to do so. We are also happy to share insights from this study with you when available.