

North Carolina State University
INFORMED CONSENT FORM for RESEARCH

Title of Study Evaluating Feedback Mechanisms While Live Coding in Virtual Reality

Principal Investigator Chris Parnin

Faculty Sponsor (if applicable)

What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

We want to determine if being able to program while using a fully live editor and/or hand movement will affect the time required to complete a given programming task. The results of this study will be used as evidence to show advantages and disadvantages of using live coding and hand movement in programming.

What will happen if you take part in the study?

Participants will be given two similar programming environments and asked to complete three different types of micro tasks. Each micro task will be performed in a virtual three-dimensional space in a web browser. By programming environment, we mean a tool used on a computer that enables programmers to create software. We do not mean environment in the sense of office space or level of noise.

There are three different categories of micro tasks. The first is positioning objects in a three-dimensional scene. The second deals with determining what portion of the given code controls which 3D object in the scene. The third deals with obtaining the locations of multiple objects in the scene.

Participants will be given a training exercise in the first environment. After completing the training exercise, participants will be given a micro task from one of the three categories. A researcher will explain the micro task to the participant and then time how long it takes the participant to complete the micro task. After the participant completes the micro task, they will move on to the next micro task in the same category. Participants will be allowed to take a 5 minute break in between micro tasks if feeling fatigued from hand motion. Once all micro tasks from a category are completed, the researcher will explain the next category of micro tasks and then the participant will complete this category of micro tasks. Once this category is complete, the third category will be explained and then the participant will complete this category as well. This process will be repeated on a second programming environment. Participants will be allowed to take a 5 minute break before moving to the second programming environment.

Participants will be timed on each micro task. If a micro task takes longer than 10 minutes, a researcher will stop the participant, note the progress made, and then move on to the next micro task. The entire experiment should take between 60 and 90 minutes, depending on the speed of the participant.

After using both environments, participants will be asked some qualitative questions such as which environment they preferred and why. Participants will then be given a brief demographic questionnaire and thanked for their time.

Risks

There are no major risks from participating in this study. Minor risks associated with typical computer use such as eye or wrist strain may be present.

Benefits

Participants will benefit from testing out cutting-edge technology.

Confidentiality

The information in the study records will be kept confidential to the full extent allowed by law. Data will be stored on password-protected computers. Only project research assistants who have the computer password will be able to access the data. No reference will be made in oral or written reports which could link you to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers that you provide.

Compensation

You will not receive any monetary compensation for participating.

What if you are a NCSU student?

Participation in this study is not a course requirement and your participation or lack thereof, will not affect your class standing or grades at NC State.

What if you are a NCSU employee?

Participation in this study is not a requirement of your employment at NCSU, and your participation or lack thereof, will not affect your job.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher, Anthony Elliott at anthony_elliott@ncsu.edu.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator at dapaxton@ncsu.edu or by phone at 1-919-515-4514.

Consent To Participate

"I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled."

Subject's signature _____ Date _____

Investigator's signature _____ Date _____