

**North Carolina State University**  
**INFORMED CONSENT FORM for RESEARCH**

Title of Study: Evaluating Text and Visual Notifications in Integrated Development Environments during Debugging Tasks

Principal Investigator: Titus Barik

Faculty Sponsor (if applicable): Emerson Murphy-Hill

**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?**

The purpose of this study is to evaluate how programmers use and interpret error notifications as presented through Integrated Development Environments (IDEs), such as Eclipse or Visual Studio.

**What will happen if you take part in the study?**

If you agree to participate in this study, you will be asked to participate in a training session to familiarize yourself with the experimental setting (5 minutes). You will then calibrate an eye tracking system, for use in subsequent portions of the study (5 minutes). The eye tracking system is camera-based, and does not make any physical contact with you. It can also work with glasses and contacts. The experiment consists of 10 tasks, and each task takes no more than 5 minutes. For each task, you will use the IDE to identify the cause of a compiler error and describe an appropriate solution to remove the defect. During these tasks, your eye tracking data and interactions with the IDE will be recorded. The total duration of the study is approximately 1-1.5 hours. The study will take place on-site at North Carolina State University.

**Risks**

Our study will introduce no additional risks beyond normal computer use.

**Benefits**

Your participation in this study will help researchers develop usable interfaces for understanding error notifications.

**Confidentiality**

The information in the study records will be kept confidential to the full extent allowed by law. Data will be stored securely in a server on campus at North Carolina State University, which is password protected and accessible only to the study staff. 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**

For participating in this study you will receive no compensation.

**What if you are a NCSU student?**

Participation in this study is not a course requirement, although some instructors in your courses *may* offer extra credit for participation. For these courses, you will receive 1% extra credit which is added to your final grade. If you withdraw prior to the completion of the study, you will still receive the extra credit, unless you withdraw immediately or there is ample evidence of bad faith on your part. Even if you choose to withdraw immediately, you may still complete an alternate non-research assignment to obtain the same amount of extra credit. The alternate assignment requires the same amount of time and effort as participating in the study.

**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, Titus Barik, at [tbarik@ncsu.edu](mailto:tbarik@ncsu.edu) (251-454-1579), or Dr. Emerson Murphy-Hill, at [emerson@csc.ncsu.edu](mailto:emerson@csc.ncsu.edu) (919-513-0234).

**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](mailto: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** \_\_\_\_\_