



Study Title: An Eye-Tracking Study of Programmers Writing Source Code Summarizations

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You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

Purpose

The study investigates what parts of a method/function programmers/developers examine during code summarization.

Procedures

In this study, you will be asked to read and summarize Java methods, one at a time. The methods are from five open source Java systems (information about the systems is given to you). The study will take approximately 45-60 minutes. While you are reading code and writing summaries, your eyes' movement will be captured using an eye-tracker.

The study consists of three main parts in the following order:

- (1) Collecting demographic information.
- (2) Performing the main study which involves reading and summarizing a set of 23 Java methods.
- (3) Answering a post-questionnaire that collects your preferences about what are the main aspects of a method/function that are most important for summarization.

You will work within the Eclipse IDE. You can navigate through the classes using the Package Explorer on the left of the screen. The right part of the screen consists of two parts. In the upper part you see the list of tabs of the methods that you will summarize. The lower part is designated for writing your method summary; as well as, providing any comments you may have about the method.

Instructions

- Start with the left most method.
- To move to the next method, you can use the method's tab located at the upper-right part of the screen.
- You may always navigate through the classes and the methods at any time during the study.
- You can refer to the method list provided to you if you lose track of opened methods.

Audio and Video Recording and Photography

The video of the screen will be recorded only. You will not appear in the tape. The recordings will be on password protected drives with the research team. The recordings will not be used for educational purposes.



Benefits

The outcome of this study is used to improve tools that automatically generate summaries for source code.

Risks and Discomforts

There are no anticipated risks beyond those encountered in everyday life.

Privacy and Confidentiality

No identifying information will be collected. Your signed consent form will be kept separate from your study data, and responses will not be linked to you.

Your study related information will be kept confidential within the limits of the law. The collected data will be kept in a secure location and only the researchers will have access to the data. Research participants will not be identified in any publication or presentation of research results; only aggregate data will be used.

(This will be used for undergraduate students only)

Compensation

By performing this study, you will receive extra credit that will be added to your course grade. However, an alternative exercise is available on the course web page should you choose to do that instead.

Voluntary Participation

Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time. Note that participating or not will not affect your course grade.

Contact Information

If you have any questions or concerns about this research, you may contact (*Dr. Jonathan Maletic*) at (jmaletic@kent.edu) or (*Nahla Abid*) at (nabid@kent.edu). This project has been approved by the Kent State University Institutional Review Board. If you have any questions about your rights as a research participant or complaints about the research, you may call the IRB at 330.672.2704.

Consent Statement and Signature

I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to participate in this study. I understand that a copy of this consent will be provided to me for future reference.

Participant Signature

Date

I am aware that the screen will be recorded during the study for the purposes of data analysis.

Participant Signature

Date