

OREGON INSTITUTE OF TECHNOLOGY

Consent Form Template

Date of Consent: \_\_\_\_\_

Research Project Title: Reflective Feedback in Software Testing

Principal Investigator: Lucas Cordova

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*\*The below sections should use language which is simple to comprehend.*

Description of the study and its purpose:

The objective for the study is to evaluate the impact that conceptual feedback has compared to raw code coverage feedback. Current industry tools currently provide testing coverage data in terms of line numbers of missing conditions, branches, and statements. However, there is evidence in the literature that this specific type of feedback, while helpful to the code, may not help the software engineer to write better tests or reduce the number of tests needed to cover the application code. Testing Tutor is a tool that allows you to submit your unit test code and it will provide the standard detailed raw code coverage, but also will provide conceptual feedback which is believed to help the software engineer create an experience that will help her/him write better tests. You are being offered an opportunity to gain some additional experience (outside of your standard assignments) unit testing using the tool. In return, the study will look at the percentage of code coverage and the number of redundant unit tests over time of using the tool. Your information will be deidentified in the analysis and following the study, the server database will be destroyed.

The data that will be collected is raw code coverage data (similar to what is provided to you when you use industry tools such as Visual Studio Code Analysis for C#/C++ or Jacoco for Java). This data will be tied to your e-mail address, however, the data will be de-identified for analysis purposes for the study report.

The only people that will have access to your data is the PI (Lucas Cordova) and a single FERPA-trained undergraduate teaching assistant.

If you wish to withdraw your data from the study, please inform the PI via email or orally so that your data can be removed from the server.

What exactly the subject is consenting to:

Submitting their unit test code to Testing Tutor system and having their un-identifiable code coverage analyzed

Explanation for why the subject is specifically being recruited for this study:

The study wishes to look at the second year software engineering students.

Criteria which would exclude a subject from being able to participate in the study:

n/a

Benefits of the study, if any, to subjects:

The conceptual feedback provided by the tool should create reflective experiences that is believe to improve the student's ability to develop unit tests.

Specific risks of the study, if any, and the likelihood of these risks harming subjects (including any financial costs for participating):

n/a

Any financial reward or other incentives for participating:

n/a

Any financial costs for participating:

n/a

Explanation for how subject data (a) will or will not be kept confidential (e.g., how it will be de-identified and protected), (b) stored (e.g., hard copies in locked filing cabinet in locked office), and (c) for how long it will be stored before being destroyed:

- (a) coverage data will be stored in an Azure database that is protected by SSL/HTTPS protocols.
- (b) stored in Microsoft SQL Server database
- (c) one month following the study

Explanation of subject's rights related to (a) voluntarily participating in the study, (b) not be penalized for electing to not participate in the study, (c) being able to withdraw from the study at any time without penalization, and (d) the procedure for how a subject can withdraw from the study:

You may withdraw from the study at any time without any penalties or consequences affecting your standing in the class.

If a subject has any questions about the nature of this study they can contact the principal investigator listed above.

If a subject has any questions about their rights as a participant in a study, or concerns about a study being harmful, they can contact the Oregon Tech IRB Chair: Trevor Petersen  
Phone Number: \_\_\_\_\_ Email: trevor.petersen@oit.edu

*\*The below signature indicates you have read and understand the above information and voluntarily consent to participate in this study.*

\_\_\_\_\_  
**Typed or Printed Name of Subject**

\_\_\_\_\_  
**Signature of Subject**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature of Witness**

\_\_\_\_\_  
**Date**