SMITH COLLEGE

Consent to Participate in a Research Study
Smith College - Northampton, MA

Title of Study: Investigating Agile Developer Actions
Investigator(s): Prof. Alicia M. Grubb, Computer Science, (413) 585-2387.

Introduction and Purpose of Study

- Git-based development workflows are widely used among practitioners in industry and open-source developers. These techniques allow engineers to independently implement features and fix bugs *on a branch*, and then request that their updates be merged into the primary branch (*i.e., trunk or root of the tree*).
- We are building an extension of the GitLab development framework to enable software developers to review requirements during development and code merging activities.
- You are being asked to be in a research study investigating how developers engage with new tooling and git-based software development. We are examining the process of code merging and the challenges and benefits offered by various methods of code review and requirements analysis.
- You were selected as a possible participant for this study because you meet our inclusion criteria:
  - applied to participate in the study,
  - have proficiency in English,
  - be currently enrolled at Smith College, and
  - passed CSC 210 Data Structures.
- Current or former members of the Grubb Lab with knowledge of the study are excluded from participating.
- We ask that you read this form and ask any questions that you may have before agreeing to be in the study.
- Ultimately, this research will be submitted to Software Engineering publication venues.

Description of the Study Procedures

- If you agree to be in this study, you will be asked to complete a variety of tasks over the course of the semester. The earlier part of the study will focus on familiarizing you with the expected behavior and codebase of the software you will be provided with, and the latter part of the study will involve your participation in the code review process. In both parts, we will consider the correctness of some of your responses and the insights you provide in others. The purpose of this study is to explore how people tend to behave, not individual answers.
- Specifically, we will track your usage activities within study-specific tooling and you will be asked to make screen recordings of your use of multiple software tools. Additionally, you will be asked to attend user experience review sessions with our research assistants to simulate the code review and merging process. In these review sessions, we will record screen interactions, as well as the audio from these interactions. We may also use eye tracking to understand how you traverse the tool interface. You will be notified before any screen/audio recording or eye tracking is used.
- As part of this study, you will be enrolled in a one-credit CSC400 special study course (with S/U participation-based grading) where you will learn about git-based multi-team software development with an introduction to software design and architecture.
- If you choose to participate, you should complete the information at the end of this consent letter.
- Upon collection, your data will be stored on our laboratory machines, Qualtrics, and Smith College servers until the data is anonymized and coded for analysis. After that all electronic data will be stored securely on a Smith College server. Upon publication, anonymized coded data will be archived in a repository on Smith ScholarWorks (https://scholarworks.smith.edu). All raw information will be destroyed after the three-year anniversary of the financial closeout of NSF award #2238482 (after approximately 7 years).
- If you would like to participate and require materials to be presented in an alternative format (e.g., large font), please contact Alicia M. Grubb at amgrubb@smith.edu.

Risks/Discomforts of Being in this Study

- There are no reasonable foreseeable (or expected) risks. There may be unknown risks.

Benefits of Being in the Study

- As a participant in this study, you will benefit from additional computer science training and skills requisitions by internship and full-time employers.

- As a developer, you may benefit from the results of this investigation as we discover how to improve developer tools.
- You will receive one CSC400 credit for study completion and the course will appear on your transcript.

Confidentiality

- We protect the confidentiality of your study data, but cannot assure confidentiality of your participation in the study.
- This study includes participating in a CSC400 special studies with other study participants. Therefore, similar to any class at Smith College, you will know who else participated in the study and these same individuals will know that you participated in the study. We ask that all participants maintain the same level of discretion about this special studies that they would any other class at Smith.
- At the beginning of the study, participants will be asked to create a git user name or pseudonym for use during the semester. Observations will be made under this pseudonym.
- The records of this study will be kept strictly confidential. All raw electronic information will be secured under password protection. We will archive the anonymized data in a repository on Smith ScholarWorks. We will not include any information in any report we may publish that would make it possible to identify you.

Payments

- There are no cash or in-kind payments for participating in this study.

Right to Refuse or Withdraw

- The decision to participate in this study is entirely up to you. You may refuse to take part in the study at any time without affecting your relationship with the investigators of this study or Smith College. Your decision to refuse will not result in any loss of benefits to which you are otherwise entitled. You have the right not to answer any single question, as well as to withdraw completely from further study at any point until November 7, 2025. Additionally, you have the right to request that the researcher not use any of your study material, until December 19, 2025.

Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before, during, or after the research. If you have any further questions about the study, at any time feel free to contact Prof. Alicia M. Grubb at amgrubb@smith.edu. If you like, a summary of the results of the study will be sent to you. If you have any other concerns about your rights as a research participant that have not been answered by the investigators, you may contact the Smith College Institutional Review Board at irb@smith.edu or (413) 585-3562.
- If you have any problems or concerns that occur as a result of your participation, you can report them to the IRB using the contact information above. Alternatively, concerns can be reported by completing a Participant Complaint Form, which can found on the IRB website at https://www.smith.edu/academics-institutional-review-board/compliance

Consent

- Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above.

☐ **I confirm that I satisfy the eligibility requirements for this study described above.**
☐ **I agree to participate in this study.**

Full Name:

Signature:

Date: