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## **The use of GenAI in supporting student learning in software design**

### **Who is conducting the study?**

You are invited to participate in this study that is being conducted by: Luiz Franciscatto Guerra, Ori Liu, Callum Curtis, Umit Akirmak, Nathan Cassee, Margaret-Anne Storey, Neil Ernst. The leading researcher is Nathan Cassee, a postdoc in the Department of engineering and computer science at the University of Victoria. Nathan Cassee can be contacted by email at [nathancassee@uvic.ca](mailto:nathancassee@uvic.ca).

The researchers may have a relationship to you as your teachers, to help prevent this relationship from affecting your decision to participate, the teachers of SENG350 will not be able to know whether you participate in this study until after the final grades for SENG350 have been submitted. To this end, a neutral third party will collect these consent forms, and members of the research team will not be present while consent forms are collected. This neutral third party will hold these consent forms from the teachers until after finalization of the course grades.

The neutral third party is Jay Samaraweera and she can be contacted at: [layanis@uvic.ca](mailto:layanis@uvic.ca). Your decision to take part in the study, or your decision to withdraw from the study, will not affect your grades or your participation in SENG350.

### **What is the purpose of this study?**

This study will examine how your assistance with generative AI tools – like GitHub Copilot and ChatGPT – shapes team problem-solving, architectural decision making, and code evolution across all three project phases. This study is important because it will reveal how AI integration affects learning outcomes, collaboration dynamics, and the quality of novice developers' software designs. It can help professors develop effective teaching strategies and curricula that leverage AI in software engineering education. You have been invited to participate in this study because you are a student of SENG350.

**It's your choice whether or not you want to take part in this study.  
Your participation is voluntary.**

### **If I choose take part in this study, what will I do?**

If you take part in this study, you will:

- Consent to us using the data and artifacts you have submitted as part of your coursework for SENG350. This includes:
  - The skill benchmarks you have submitted during the course.
  - The AI chat logs you have submitted as part of your coursework.
  - The design document, development histories and the source-code of the software system you submit as part of the coursework.
  - The teamwork scores you have reported as part of the peer-reflections.
  - The reflexive essay you have written to reflect on your learning.

Your data will be stored in secured digital environments, and a fully anonymized copy of the data will be released as part of a replication package. This copy will not contain any information that will allow anyone to link it back to you.

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## What are the possible harms and discomforts?

There are no known risks associated with taking part in this study.

## What are the possible benefits of taking part in this study?

Although you may not benefit directly from the study, the results will help society understand how students can apply AI effectively for software architecture. The results of the study will be made available to you upon completion of the study. Upon completion of the analysis, we will send a summary of the results of the study by email to you if you fill out your email address in this consent form.

## Who will see my information?

Only the researchers involved in this study will be able to access the data used for this study. Your confidentiality will be protected, and we will not share your name or personal information in the results of the study. Information collected during this study will be stored and secured in digital environment managed by the university of Victoria only available to the researchers involved in this study.

## How will the study results be shared?

Findings from this study will be reported in scientific articles, the PhD thesis of Luiz Franciscatto Guerra, the Msc thesis of Umit Akirmak, the Msc thesis of Ori Liu, and presented at conferences, etc. Your name or personal information will not be used in these publications or presentations.

## Please note:

You may change your mind and withdraw from this study at any time. There is no need to explain why you have changed your mind. To withdraw from the study you can contact the arms-length colleague Jay Samaraweera [jayanis@uvic.ca](mailto:jayanis@uvic.ca). If you withdraw from the study you will be asked permission to use your contribution in the analysis and final report of this study. You may agree or refuse this request without explanation.

If you have any questions or if you would like to discuss this study further, please contact the researcher by email at [nathancassee@uvic.ca](mailto:nathancassee@uvic.ca), or you can contact the arms-length colleague at [jayanis@uvic.ca](mailto:jayanis@uvic.ca).

You can also contact the Human Research Ethics Office at the University of Victoria at 250-472-4545 or [ethics@uvic.ca](mailto:ethics@uvic.ca), to check the ethical approval of this study, or to raise any concerns you might have.

## Please remember that participation in this study is voluntary.

### Consent:

I have read this consent letter.....yes.....no  
I have had the opportunity to ask questions.....yes.....no  
I understand that my participation in this study is voluntary .....yes.....no  
I understand that I can withdraw my consent at any time.....yes.....no  
I agree to take part in the study.....yes.....no

If you're interested in receiving a summary of the results of the study by email fill out your email address  
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\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**A copy of this consent letter will be left with you and the researcher will take a copy.**