Study title	How is the users' preference on automated testing tool for ML softwares?
Researcher[s]	Prof. Shan Lu, Phd Student Chengcheng Wan, Undergraduate Shicheng Liu from University of Chicago

We're inviting you to participate in a research study. Participation is completely voluntary. If you agree to participate now, you can always change your mind later. There are no negative consequences, whatever you decide.

What is the purpose of this study?

Machine learning has become a key component of software systems. We designed an automated testing tool for testing and fixing ML software. However, ML techniques aim to simulate human understanding, e.g. what is in the picture, whether the document is positive or negative. It is hard to judge the correctness of ML software without human inspection. As a result, we want to understand the users' attitudes towards the functionality and quality of ML softwares.

What will I do?

Our research contains two parts, an online survey and a remote interview. You will participate in either of them.

[Online survey] You will be shown the same ML software with multiple different implementations, i.e, a set of software using different neural networks to fulfill the same functionality. You will be asked to try these software and select the preference between them. All procedures will occur online through participants recruited from Amazon Mechanical Turk. It might take around 20 minutes for you to finish the study.

[Remote interview] The interview will occur individually with Zoom Meeting. You will be granted access to our automated testing tool. You will be asked to write a simple Python code snippet and use our tool to examine their implementation. You will share your attitude towards our tool. The audio and computer screen where you write Python code will be recorded. It might take around 45 minutes for you to finish the study.

Risks

Possible risks	How we're minimizing these risks
Breach of confidentiality (your data being seen by someone who shouldn't have access to it)	● Data is anonymous. ● We'll store all electronic data on a password-protected, encrypted computer.
Online data being hacked or intercepted	This is a risk you experience any time you provide information online. We're using a secure system to collect this data, but we can't completely eliminate this risk.
Amazon could link your worker ID (and associated personal information) with your survey responses.	Make sure you have read Amazon's MTurk participant and privacy agreements to understand how your personal information may be used or disclosed.

There may be risks we don't know about yet. Throughout the study, we'll tell you if we learn anything that might affect your decision to participate.

Other Study Information

Possible benefits	Helping researchers understand how people evaluate ML software quality.
Estimated number of participants	200 participants will be invited to complete this study
How long will it take?	20-45 minutes
Costs	None
Compensation	$5 paid through Amazon Mechanical Turk after completing the online survey. $10 paid through Amazon gift card after completing the remote interview
Future research	Your data won't be used or shared for any future research studies.
Funding source	National Science Foundation (NSF) is funding this research study.

Confidentiality and Data Security

Where will data be stored?	Our lab's computers with password protection
How long will it be kept?	After the analysis is finished, the data will be removed from our lab's computers and archived on Uchicago Box in encrypted form.

Who can see my data?	Why?	Type of data
The researchers	To analyze the data and conduct the study	De-identified (no names, birthdate, address, etc.)
The IRB (Institutional Review Board) at UChicago The Office for Human Research Protections (OHRP) or other federal agencies	To ensure we're following laws and ethical guidelines	De-identified (no names, birthdate, address, etc.)
Anyone (public)	If we share our findings in publications or presentations	● De-identified (no names, birthdate, address, etc.) ● If we quote you, we'll use a pseudonym (fake name)
Amazon	Because they own the MTurk internal software, and to issue payment	● MTurk worker IDs ● There is a possibility Amazon could link your worker ID (and associated personal information) with your survey responses.

Contact information:

For questions about the research	Chengcheng Wan	cwan@uchicago.edu/(312) 391 1552

For questions about your rights as a research participant	IRB (Institutional Review Board; provides ethics oversight)	sbs-irb@uchicago.edu/(773) 834 7835
For complaints or problems	Chengcheng Wan	cwan@uchicago.edu/(312) 391 1552
	IRB	sbs-irb@uchicago.edu/(773) 834 7835

If you have had all your questions answered and would like to participate in this study, click the consent button below. Remember, your participation is completely voluntary, and you're free to withdraw from the study at any time.