

## The Ohio State University Consent to Participate in Research

<b>Study Title:</b>	<b>Identifying spatial patterns on choropleth maps: A comparison between humans and deep learning models</b>
<b>Protocol Number:</b>	
<b>Researcher:</b>	<b>Jialin Li and Ningchuan Xiao</b>
<b>Sponsor:</b>	

**This is a consent form for research participation.** It contains important information about this study and what to expect if you decide to participate.

**Your participation is voluntary.**

Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate.

**Purpose:**

The goal of the overall study is to explore how well artificial intelligence (AI) algorithms can compare with humans in identifying spatial patterns in a specific type of maps: choropleth maps. In order to conduct the comparative study, it is critical to understand how humans perform on reading spatial patterns on the map when the exact same map will also be processed by computer programs. On the human side, we intend to conduct surveys that use the same set of maps that will be used by the computers to ask our subjects if they can recognize the patterns presented on the maps.

**Procedures/Tasks:**

You will be presented choropleth maps with different spatial patterns and be asked to answer two simple questions about spatial patterns for each choropleth maps. For example, one question is: do the values tend to occur near their similar values or different values. You need to answer the questions based on what you read and learn from the mapped area.

**Duration:**

The duration of all the experiments will be about 20 minutes.

You may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University.

**Risks and Benefits:**

***What risks, side effects or discomforts can I expect from being in the study?***

There would be very unlikely discomforts of your participation. The greatest risk to participants in this study may be one of boredom due to the repetitive nature of the task. The choropleth maps can be similar.

***What benefits can I expect from being in the study?***

Your participation in this study will help understand how well artificial intelligence (AI) algorithms can compare with humans in identifying spatial patterns on choropleth maps. However, you will not benefit directly from participating in the study. For students in two undergraduate classes in the Department of Geography, Design and Implementation of GIS (GEOG 5223) and GeoVisualization (GEOG 5201), you can acquire bonus participation points for the courses.

**Confidentiality:**

We will work to make sure that no one sees your online responses without approval. But, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you.

Also, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law. Also, your records may be reviewed by the following groups (as applicable to the research):

- Office for Human Research Protections or other federal, state, or international regulatory agencies;
- The Ohio State University Institutional Review Board or Office of Responsible Research Practices;
- Authorized Ohio State University staff not involved in the study may be aware that you are participating in a research study and have access to your information; and
- The sponsor, if any, or agency (including the Food and Drug Administration for FDA-regulated research) supporting the study.

**Future Research:**

Your de-identified information will not be used or shared with other researchers.

**Incentives:**

None.

**Participant Rights:**

You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you are a student or employee at Ohio State, your decision will not affect your grades or employment status.

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By agreeing to participate, you do not give up any personal legal rights you may have as a participant in this study.

This study has been determined Exempt from IRB review.

**Contacts and Questions:**

For questions, concerns, or complaints about the study you may contact the researchers Mr. Li (li.7957@osu.edu) or Dr. Xiao (xiao.37@osu.edu).

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Office of Responsible Research Practices at 1-800-678-6251 or hsconcerns@osu.edu.

**Providing consent**

I have read (or someone has read to me) this page and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study. I am not giving up any legal rights by agreeing to participate.

To print or save a copy of this page, select the print button on your web browser.

**Please click the arrow button below to proceed and participate in this study. If you do not wish to participate, please quit the survey by closing out your browser window. At any point if you want to quit, you can just close out the browser window.**