

# Software warns users about revealing sensitive personal information

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Computer Science doctoral student Mini Zeng has been working on the software and the behavioral research.

University of Alabama in Huntsville researchers are seeing potential in a software application that could effectively warn users when they are about to give away sensitive personal information online.

Dr. Frank Zhu, a computer science associate professor, and Dr. Sandra

Carpenter, a psychology professor, say the software, originally developed to adapt eye recognition equipment for use in their behavioral research involving online information disclosure, has been promising in displaying warnings in a dynamic manner that is more readily perceived and less easily dismissed by the user.

Computer Science doctoral student Mini Zeng has been working on the software and the behavioral research for about 2 ½ years.

"I need to know how long the user's eyes stay on the area and I need to use that input in my research," Ming says.

The eye tracker detects where a user's eyes are at the computer screen and records how long they gazed at that spot. Zeng uses these two functions to find when a user's eyes remain on a request for sensitive personal information. At that moment, a warning box displays. The [app](#) tracks the amount of time the user's eyes are on the warning, and the box stays on the screen until sufficient time has passed to ensure it has been read, then when the user looks away it disappears.

"That's the novelty here, is using the eye tracker as an input to warn people what not to do," says Dr. Zhu.

If the user looks away from the warning, it remains active until the app detects that enough time has been spent on it to read it.

The relative unpredictability of a warning that can pop up anywhere on a screen when a user is looking at a request to divulge personal information helps overcome behavioral obstacles to paying attention to standard warnings that the researchers have identified in their work.

"If you get a warning every single time and it becomes annoying or habitual, you are going to ignore it," says Dr. Carpenter.

For their behavioral research, Zeng created an app that mimics a restaurant reservation app asking for personal information. That app is used along with the warning software to determine the effectiveness of warnings in test subjects.

**More information:** Feng Zhu et al. Mindlessness attacks, *Procedia Manufacturing* (2015). [DOI: 10.1016/j.promfg.2015.07.174](https://doi.org/10.1016/j.promfg.2015.07.174)

Provided by University of Alabama in Huntsville

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