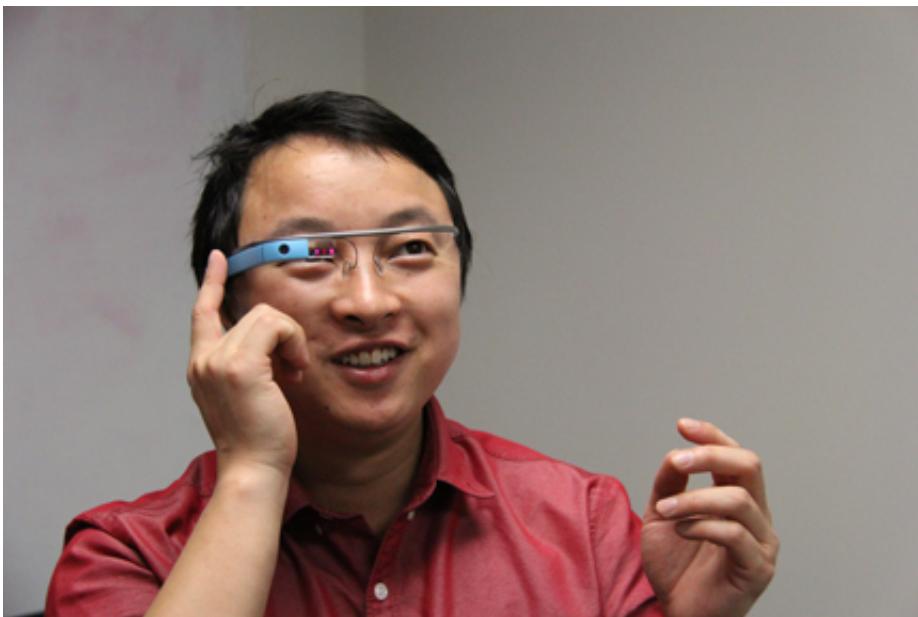


WSU researcher wants to make Google Glass safer for drivers

November 20 2013, by Lainie Rusco



WSU researcher wants to make Google Glass safer for drivers. Credit: Lainie Rusco

With his Google Glass in place over his right eye, Jibo He weaves in and out of traffic, careful to maintain his speed and avoid obstacles along the road. He takes his focus off the road and sneaks a peak at the Glass screen to look at the main menu. Before he has the chance to look back in front of him, he slams full-speed into the back of a truck.

Thankfully, He is only using a [driving](#) simulator and is able to laugh off

his mistake. He knows the main menu on the Google Glass like the back of his hand, yet it only took a few seconds of looking at it instead of the road to cause him to completely lose control.

It's this kind of event – only in real life – that He hopes he can keep from happening to other people.

He, an assistant psychology professor at Wichita State University, is one of only two people in Wichita to have early access to the Google Glass – a product you wear like a pair of glasses to perform functions such as taking photos and videos, making calls and sending text messages, and reading driving directions.

It's the driving part that has He concerned.

The National Safety Council found that in 2011 – the most recent statistics – as many as 213,000 car crashes in the United States involved drivers who were texting.

Through his research at Wichita State, He hopes to do his part to make driving a bit safer. He runs the Human Automation Interaction Lab at Wichita State.



Jibo He uses his driving simulator to conduct Google Glass safety research.

The lab uses an advanced driving simulator, Google Glass, smartphones, advanced eye-trackers and EEG sensors.

He studies driving behaviors under various conditions and driver states, such as drowsy driving, driving while texting, mind-wandering, and distracted driving.

But his biggest research project now focuses on how new technologies – specifically Google Glass - influence driving performance.

"Is it safe to drive while wearing and interacting with Google Glass? This is an important question for driving researchers, legislators, auto manufacturers and GPS companies," He said.

Reducing driving risks

He is collecting data to evaluate how distracting Google Glass is to driving performance, having recently finished a similar project on texting while driving using smartphones.

Texting impairs the ability to follow the car in front of you and stay in your own lane, he said. Because Google Glass allows drivers to send text message and make calls as well, He is evaluating whether interactions with Google Glass would influence driving performance in the same way.

By providing a better understanding of the behaviors of driving with Google Glass, He hopes he can help improve it by making it less distracting, develop new technologies to mitigate driver distractions, and inform lawyers, legislators, driver trainers and insurance companies on how to evaluate the risks of driving with Google Glass.

"Driver distraction is the major cause of traffic accidents, and drivers continue to engage in many distracting behaviors, such as texting or cell phone conversation," He said. "I am interested in driver distraction and technologies because I hope to reduce distraction and fatigue-related traffic accidents by studying driving behaviors and developing new technologies."

He recently finished developing a technology using Google Glass to detect driver fatigue. The technology has the potential to improve safety in the aviation and auto industries and reduce fatigue-related accidents. He has also patented four smartphone apps aimed at reducing driver fatigue.

Provided by Wichita State University

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