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This piece of music could stop your Amazon Alexa from working

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By [Loyal Liverpool](#)



Alexa features on a range of devices, including the Amazon Echo
Russell Hart / Alamy Stock Photo

Alexa, can you hear me? Researchers have discovered a way to jam Amazon's voice assistant Alexa from responding to commands.

"It was easier to exploit than we expected," says Juncheng Li at Carnegie Mellon University in Pennsylvania.

He and his colleagues created an audio clip that prevents Amazon's system from responding to the "Alexa" command word if it is played as you are speaking. Li says he expects that similar attacks would work against other voice assistants too. "These

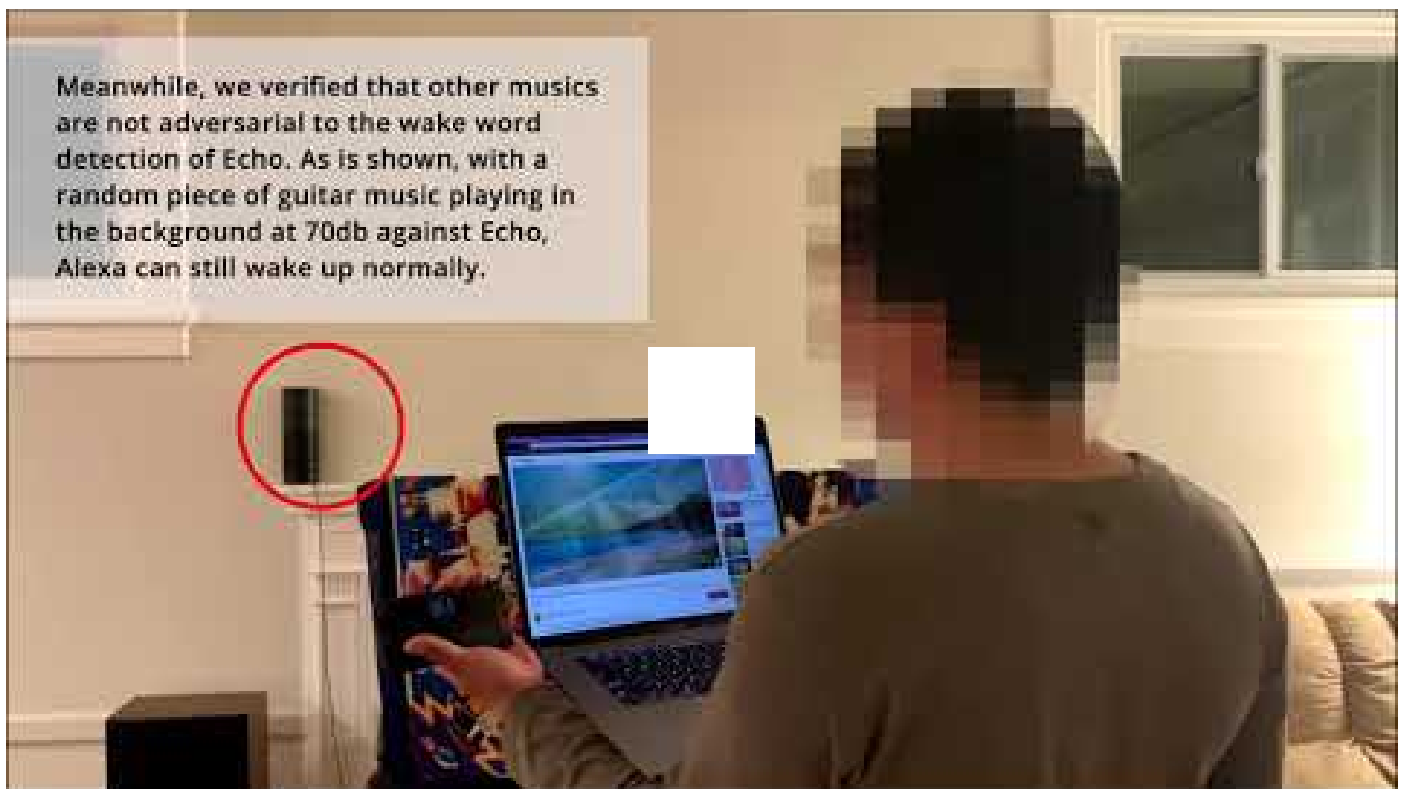
systems are all made in a very similar way,” he says.

Li and his team first created their own voice assistant, based on Alexa. They developed an audio attack clip us attempted to generated guitar sounds that the voice assistant didn't respond to – their goal was to find a sound the assistant would ignore.

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They then tried the attack on Alexa. When the clip was playing, Alexa responded to the audio cue “Alexa” only 11 per cent of the time, compared with 80 per cent of the time when other music was playing and 93 per cent of the time when no audio clip was playing at all.

Li says these types of attacks could be used to prank, confuse or distract people, which could be a particular concern if they are driving – [Amazon launched a version of Alexa for cars earlier this year](#). Thankfully, Li says it should be fairly easy for Amazon to modify Alexa to detect and avoid such attacks.

Mathana Stender, a tech ethicist based in Berlin, Germany, says the attack shows that tech companies need to be able to respond quickly to vulnerabilities. “There’s going to be more and more attack vectors like this, companies need to think about how they design these systems and how they are patched.”

When asked about the attack, Amazon responded: “Customer trust is our top priority and we take customer security seriously. We are reviewing the findings of this research paper. What is demonstrated poses very little impact on customers. It would require specific audio samples to be played at the same time as a user saying the wake word and would only increase times where the wake word is not detected.”

Reference: arxiv.org/abs/1911.00126

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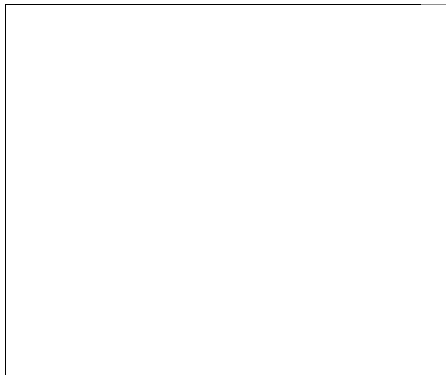
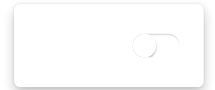
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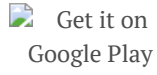
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