

For Cybersecurity, listen to this 11-year-old

- 1 When he's not obsessing over cybersecurity, giving a keynote speech in The Hague or New Delhi, or working on the next degree of his black belt in Kung Fu, 11-year-old Reuben Paul can usually be found doing his homework. Reserved and humble, the thoughtful lad with quiet eyes would seem like any other Texas pre-teen if it wasn't for his preoccupation with cybersecurity.
- 2 Reuben got his start in network security at the age of eight, thanks to his father, Mano, who also works in the field. Years of listening in on dad's business calls taught him the basics, and when Reuben helped his father out by reminding him of a key security term he'd forgotten, Mano figured the kid might have a knack for the industry. His immersion into computer and network security came faster than anyone could have expected: Within months Reuben had hacked a smartphone, designing a fake app that looked like a game. "If you tap on it, I immediately have full root access to the device and can turn on the camera," he says. "I did that when I was nine."
- 3 But Reuben found himself in the limelight — and on security conference stages across the world — when he set his mind to hacking his own seemingly innocuous toy: a teddy bear embedded with a voice recording system. The idea of the bear — Reuben calls him "Bob" — is that parents can use a smartphone app to record a message for their child, then upload it to the toy. After the child hears the message from the bear's mouth, he can record his own response and send it back to mom or dad's phone. In Reuben's mind it represented a risk in the so-called smart home.
"Eventually we reverse-engineered the software and figured out how to turn the microphone on at will. I can stand outside anyone's house and connect to the toy bear," he says.
- 4 The good news is that there is no cause for 9, because Reuben's mission is to educate both kids and adults about the risks of these kinds of devices, all part of the emerging Internet of Things. He's even started a nonprofit company, which makes use of Kung Fu symbology to train children in cybersecurity basics. New students in the program begin as a



white belt. As they progress through the online lessons, eventually they earn their digital black belt in cybersecurity.

- 5 Reuben's counsel is in high demand and he travels so much that he's on his third passport. But the bright young boy has eyes firmly on the future. "I want to use my cybersecurity skills for the good of humanity. I want to be a businessman by day and a cyberspy by night and also an Olympic gymnast," he says. "But first I have to pass the sixth grade."

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