

# Mission Possible

10 ways computer science is making the world a better place...



## 1 THINK TWICE!

From anonymous trolling to targeted abuse, the Net is a playground for bullies. But, stopping to think before hitting "send" can change that. Trisha Prabhu is 15, and she's been coding since she was 10. Trish created ReThink, an app that recognizes common bullying words. These phrases trigger a pop-up window that prompts the writer: "Are you sure you want to do that?" Trisha's studies found that the prompt leads bullies to delete their message 93% of the time.

[<bit.ly/CWC\\_Rethink>](http://bit.ly/CWC_Rethink)

## 2 DITCHING GRAFFITI

Vanessa Tostado, Ashley Davis, Margarita Tenisi, and Rosie Valencia, four students from East Palo Alto (EPA), are the EPA Chica Squad who proved that code can help clean up neighborhoods. "We started with issues in the community and then looked at what type of apps could help," says Rosie. The girls created an Android app called Tag It! that tracks pictures of trash, graffiti, and other neighborhood vandalism, tags their location, and creates an event to clean it up. Sweet!

[<bit.ly/CWC\\_TagIt>](http://bit.ly/CWC_TagIt)



## 3 POWERING UP + MAKING FRESH WATER

Want technology that can charge your phone and provide fresh water? Watly can do just that. The 131-foot-long thermal solar-powered hub purifies water, generates electricity, and provides Internet services. Watly 2.0 was super successful in the village of Abenta in Ghana, and an Indiegogo campaign is currently underway to roll out the 3.0 version in priority regions of Africa. The purification process can treat more than 1,300 gallons of water each day, and provide villagers with a wireless Internet connection up to 1,640 feet away. Nice.

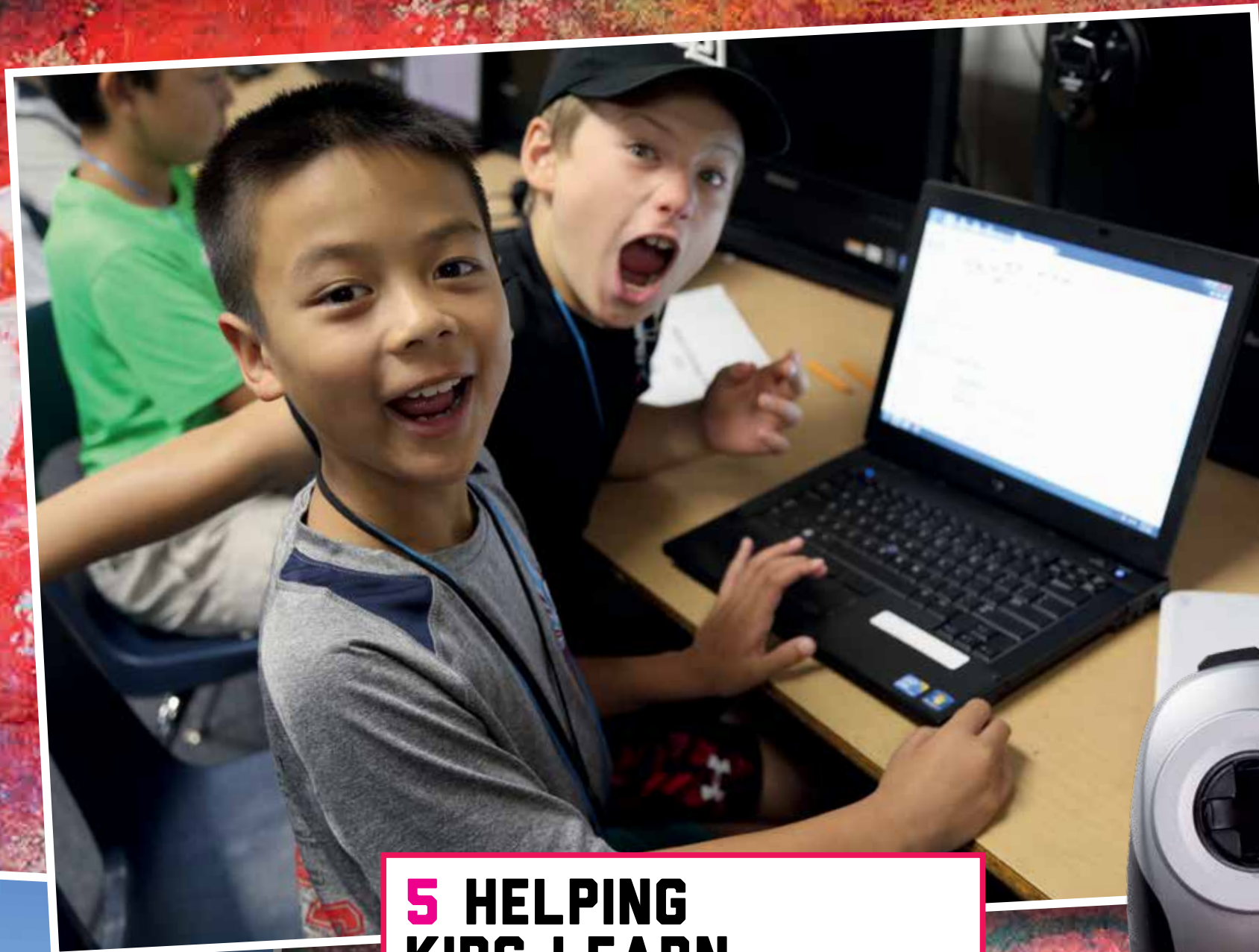
[<bit.ly/CWC\\_Watly>](http://bit.ly/CWC_Watly)



## 4 MAPPING DISASTERS

Getting aid to people after earthquakes and other natural disasters requires good maps, but many rural areas remain uncharted. Whenever a major disaster strikes, the Humanitarian OpenStreetMap Team rallies a network of volunteers to create online, open-source maps that help responders reach those in need and provide useful local information for emergency services. So far, more than 3500 Missing Maps volunteers have made 12 million edits to OpenStreetMap, putting 7.5 million people on, like, the map.

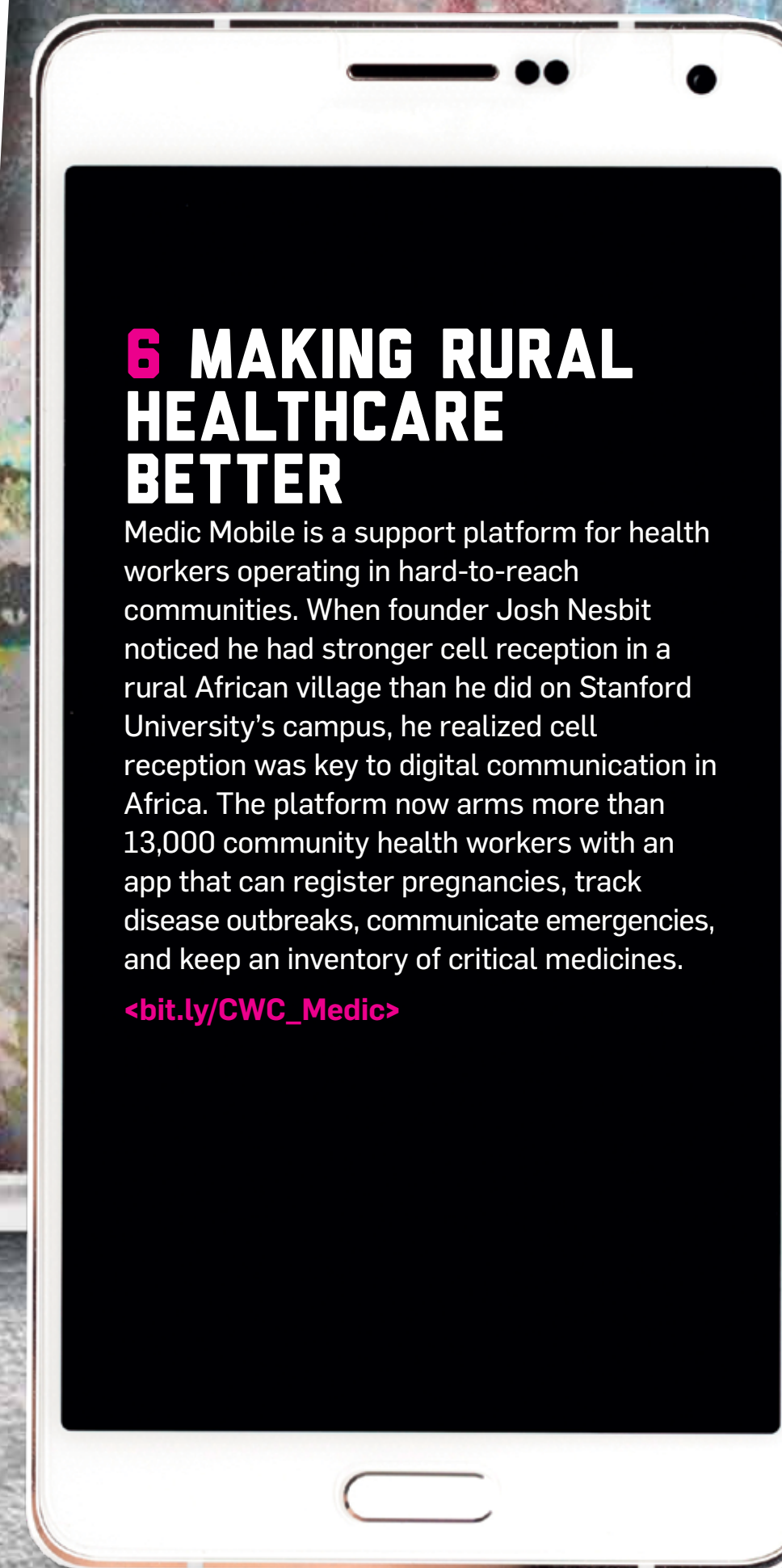
[<bit.ly/CWC\\_Disaster>](http://bit.ly/CWC_Disaster)



## 5 HELPING KIDS LEARN

Children are wired to learn. This natural capacity drives the Curious Learning System, which loads tablets with literacy apps designed to help children to teach themselves to read. The fun activities draw on the latest developments in neuroscience and learning theory. The Curious Learning System was pioneered by the Global Literacy Project, a nonprofit organization founded to ensure that every child receives an education, regardless of resources or location.

[<bit.ly/CWC\\_CLS>](http://bit.ly/CWC_CLS)



## 6 MAKING RURAL HEALTHCARE BETTER

Medic Mobile is a support platform for health workers operating in hard-to-reach communities. When founder Josh Nesbit noticed he had stronger cell reception in a rural African village than he did on Stanford University's campus, he realized cell reception was key to digital communication in Africa. The platform now arms more than 13,000 community health workers with an app that can register pregnancies, track disease outbreaks, communicate emergencies, and keep an inventory of critical medicines.

[<bit.ly/CWC\\_Medic>](http://bit.ly/CWC_Medic)



## 7 PINPOINTING ABUSE

Child abuse affects more than three million children in the United States every year, yet individual cases can be difficult to identify as victims are rarely in a position to report offenses. Data is key to addressing the issue, so students at the University of Texas, Dallas created a ZipRisk Map using US Census and other data to rank Texas zip codes based on frequency of social issues, such as teen birth, substance abuse, and child poverty. By identifying high-risk regions, state and local organizations can help peeps in the right place at the right time.

[<bit.ly/CWC\\_Ziprisk>](http://bit.ly/CWC_Ziprisk)

## 8 GAMING FOR CHANGE

Global gamers are helping to fight major health threats. Foldit showed the power of video games to solve real-life problems after gamers took just 10 days to get to the bottom of a virus behind an AIDS-like disease in monkeys. Now, more than a million gamers in 140 countries are helping the human race by playing Phylo, Eterna, Project Discovery and other games, and making a difference with every challenge they get through.

[<bit.ly/CWC\\_Foldit>](http://bit.ly/CWC_Foldit)



## 9 CODE CAPABILITIES

Kassidy McIntyre and Brittany Robinson, two high school students from Phoenix, Arizona won the Computer Science Teachers Association's 2015 Faces of Computing contest with a video about Kassidy's brother DJ, who was diagnosed with autism when he was two years old. "Our entry was a story about a girl (Brittany) who teaches DJ how to code. He then passes his knowledge on to another girl (me) at the end of the video," says Kassidy. The video touches on a serious issue for many people with disabilities - isolation. "The message we really wanted to convey was the power of code and how it can connect people of different ages and genders and from all walks of life," Brittany adds. Kassidy and Brittany first encountered computer science in their sophomore year. They enjoyed it so much that they both took AP courses in computer science, and are now considering it as their major when they go to college.

[<bit.ly/CWC\\_Capabilities>](http://bit.ly/CWC_Capabilities)



## 10 STANDING UP FOR HUMAN RIGHTS

Big-time cruelty and awful events threaten global security and leave long-lasting scars on those affected. The Tech Challenge for Atrocity Prevention supports problem-solvers who develop innovative concepts and prototypes to help. People's Intelligence, cofounded by computer engineer Yilin Huang, gives victims and witnesses the tools to write down and verify their stories and produce useful info for official organizations to use.

[<bit.ly/CWC\\_Humanrights>](http://bit.ly/CWC_Humanrights)