VIDEOS

This Laundry Robot Can Almost Wash All Your Clothes for You

CARL FRANZEN
Feb 5 2015, 4:40pm

It can't quite dry them yet, though.

Image: Siddharth Srivastava, Shlomo Zilberstein, Abhishek Gupta, Pieter Abbeel, Stuart Russell
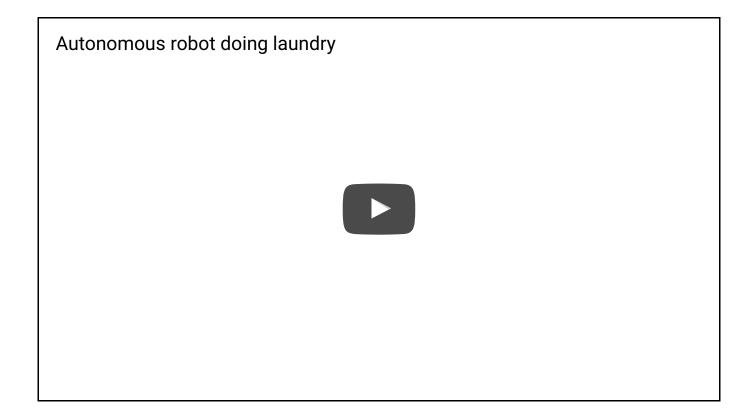
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For as long as humans have been washing clothes, we've dreamed up ways to make that bothersome chore a bit easier, progressing from little-more-than sticks and logs to washboards, all the way up to today's "smart" washing machines from the likes of Samsung and Whirlpool. But we still haven't quite reached the level of comfort enjoyed by the *Jetsons*, who of course had a robot maid named Rosie to take care of all* their chores.

I'm pleased to say we are getting closer, however. Scientists from the University of

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Autonomous robot doing laundry

The software, which the scientists have been working on for several years now, relies on a Microsoft Kinect sensor attached to a programmable PR2 robot. With the sensor, the robot can see dirty clothes in a pile, put them in a laundry basket, move the basket to a laundry machine, load the machine, close the door, and fold clean clothes. Still missing are

instructions that would let it load soap, transfer clothes from washer to dryer, and pull the clothes out of either machine.

Nonetheless, the laundry robot is no slouch, given the fact that for as mundane as washing clothes seems, completing all the necessary steps involved reliably is actually quite challenging for a bot. As the scientists wrote in a new paper on their work presented at the AAAI Conference on Artificial Intelligence in Austin late last month: "The exact number of clothes in the heap and the number that may be picked up with each grasp cannot be determined precisely" by the robot, so it essentially has to guess and keep going until there are no more clothes in sight.

So far, their software computes a solution to that problem in "less than one second," though actually moving and loading the clothes takes far longer—about 15 minutes—as seen in the 30x-sped-up video above. It's still a ways away from getting kids out of their chores, but maybe it will be ready by the time we're moving into our space homes.

*Judy Jetson actually did the laundry herself in at least one episode of the 1980s series, a distressing reminder of how retrograde the show actually was overall in terms of gender roles and society.

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Google's Anti-Bullying AI Mistakes Civility for Decency

JY **JILLIAN YORK**
Aug 18 2017, 5:00am

A Pompeian Beauty, Blogging, after Raffaele Giannetti. Image: Mike Licht/Flickr

The culture of online civility is harming us all.

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As politics in the US and Europe have become increasingly divisive, there's been a push by

op-ed writers and politicians alike for more "civility" in our debates, including online. Amidst this push comes a new tool by Google's Jigsaw that uses machine learning to rank what it calls the "toxicity" of a given sentence or phrase. But as Dave Gershgorn reported for *Quartz*, the tool has been criticized by researchers for being unable to identify certain hateful phrases, while categorizing innocuous word combinations as toxic.

The project, Perspective, is an API that was trained by asking people to rate online comments on a scale from "very toxic" to "very healthy," with "toxic" being defined as a "rude, disrespectful, or unreasonable comment that is likely to make you leave a discussion." It's part of a growing effort to sanitize conversations online, which is reflective of a certain culture within Silicon Valley and the United States as a whole: The culture of civility.

The tool seems to rank profanity as highly toxic, while deeply harmful statements are often deemed safe

If we were merely kind to one another in our interactions, the argument goes, we would be less divided. Yet, this argument fails to recognize how politeness and charm have throughout history been used to dress up hateful speech, including online.

Perspective was trained on text from actual online comments. As such, its interpretation of certain terms is limited—because "fuck you" is more common in comments sections than "fuck yeah," the tool perceives the word "fuck" as inherently toxic. Another example: Type "women are not as smart as men" into the meter's text box, and the sentence is "4% likely to be perceived as 'toxic'." A number of other highly problematic phrases—from "men are biologically superior to women" to "genocide is good"—rank low on toxicity. Meanwhile, "fuck off" comes in at 100 percent.

This is an algorithmic problem. Algorithms learn from the data they are fed, building a model of the world based on that data. Artificial intelligence reflects the values of its creators, and thus can be discriminatory or biased, just like the human beings who

program and train it.

So what does the Perspective tool's data model say about its creators? Based on the examples I tested, the tool seems to rank profanity as highly toxic, while deeply harmful statements—when they're politely stated, that is—are often deemed safe. The sentence "This is awesome" comes in at 3 percent toxic, but add "fucking" (as in the Macklemore lyric "This is fucking awesome") and the sentence escalates to 98 percent toxic.

In an email, a Jigsaw spokesperson called Perspective a "work in progress," and noted that false positives are to be expected as its machine learning improves.

This problem isn't unique to Google; as Silicon Valley companies increasingly seek to moderate speech on their online platforms, their definition of "harmful" or "toxic" speech matters.

Civility über alles

The argument for civility is thus: If we were only civil to each other, the world would be a better place. If only we addressed each other politely, we would be able to solve our disagreements. This has led to the expectation that any speech—as long as it's dressed up in the guise of politeness—should be accepted and debated, no matter how bigoted or harmful the idea behind the words.

Here's what this looks like in practice: A Google employee issues a memo filled with sexist ideas, but because he uses polite language, women are expected to debate the ideas contained within. On Twitter, Jewish activists bombarded with anti-Semitic messages are suspended for responding with language like "fuck off." On Facebook, a Black mother posting copies of the threats she received from racists gets suspended due to the language in the re-posted threats.

In this rubric, counter speech—long upheld as an important concept for responding to hate without censorship—is punished for merely containing profanities.

> **_Read More: [Inside Wikipedia's Attempt to Use Artificial Intelligence to Combat Harassment](#)_**

It is the culture amongst the moderators of centralized community platforms, from mighty Facebook to much-smaller Hacker News, where "please be civil" is a regular refrain. Vikas Gorur, a programmer and Hacker News user, told me that on the platform "the slightest personal attack ('you're stupid') is a sin, while a 100+ subthread about 'was slavery really that bad?' or 'does sexual harassment exist?' are perfectly fine."

Free speech, said Gorur, "is the cardinal virtue, no matter how callous that speech is."

From Washington to the Valley

This attitude is not only a phenomena within Silicon Valley, but in American society at large. Over the past eight months since the United States elected a reality television star to its highest office, the President's opponents have regularly been chastised for their incivility, even as their rights are being ripped out from under them.

Civility as a mode for discourse favors those who don't express their emotions

Much of the pro-civility rhetoric in politics has been aimed at women—the silencing of Elizabeth Warren on the Senate floor during the hearings for Jeff Sessions comes to mind.

These calls for civility in the face of discriminatory or hateful speech can be classified as tone policing, a means of deflecting attention from injustice by shifting focus from an original complaint to the style and words used to make the complaint. Placing civility as a value above all else can also result in the spread of well-masked yet truly toxic ideas.

None of this is to say that civility doesn't have value. Civility in our everyday interactions is a virtue to which we should aspire. And we know that some online language is connected

with real harm. A 2015 study found a direct geographic correlation between anti-Muslim Google searches (such as "kill Muslims") and anti-Muslim hate crimes. Psychology research cited in the same article suggests that emotions, not beliefs, best predict discrimination.

But civility as a mode for discourse remains problematic, favoring those who don't express —or intentionally mask—their emotions, and punishing those who struggle to do so.

Can Perspective work?

So, can the Perspective API help improve conversations? Not in its current state, although Jigsaw is working to improve it. "We released Perspective when we did because we wanted to share our work with the research community that's working on addressing similar issues, and because we wanted to work with publishers and developers to improve online conversations," the spokesperson said.

And what should Google's Jigsaw do? Given the current controversy within the company around the value of women and people of color, it would behoove the think tank to take down this version of the tool—a tool that, like James Damore and his supporters, fails to see the toxicity in politely questioning the value of women.

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CYBERWAR

Here's What's Coming in the New Season of CYBERWAR

VICELAND's show on hacking and cyberwarfare is back for a new season.

LORENZO FRANCESCHI-BICCHIERAI
Aug 17 2017, 12:11pm

Last year, the crew of CYBERWAR, the VICELAND show about hacking and war, traveled the world to explore the future of hacking and war.

Former Motherboard editor Ben Makuch and the rest of the CYBERWAR team went to Israel, spoke to former NSA hackers, victims of the Ashley Madison hack, and the infamous hacker who's embarrassed and exposed spyware companies, and visited Russia and Ukraine to visit the digital frontlines of what's perhaps the internet's most intense conflict right now

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This year CYBERWAR is travelling to more countries—and going back to Russia—to explore the biggest hacking stories of the moment.

You can watch a trailer that teases some of the biggest episodes of the new season above. Season 2 of CYBERWAR airs every Tuesday at 10 pm ET in the US and Canada, starting October 3. The episodes will also be posted online at VICELAND.COM (these will be available only to users in the US and Canada). Here are all the ways to watch VICELAND in the US and in Canada.

While we wait for the new episodes to come out, we caught up with Makuch to talk about what they have in store.

In season one you went to all corners of the globe, where in the world did you guys go this time?

This season we followed exactly what we did in the last season. We found a really interesting story with some sort of conflict between geopolitics and the online landscape of cyberwarfare. We went out and found it, and we didn't care where it was. This season we went to places like Mexico, Pakistan, Estonia, Latvia, Germany, and Russia to get a broad perspective on the things that are going on in other parts of the world that you might not be thinking about. Places like Mexico, where we do an entire episode looking at how cartels interact with the government and how that could influence cyber.

Of course, we did something very obvious too. We went to Russia and investigated what is perhaps the biggest and most influential hack in the history of hacking. And then we went to Pakistan to look at the US government's intelligence operations to find, track, and kill terrorists. Whether it's Al-Qaeda, the Taliban, or even ISIS, we looked at how that entire process goes down. That's something that I think a lot of people are interested in, to really know the fundamentals of how the government tracks these people down. And a big part of it is using signals intelligence [the surveillance of radio, satellite and internet communications] methods so that when a terrorist picks up a cellphone or taps on a keyboard or opens a link on Google Chrome, you can rest assured that there's an operative trying to find where they are, or know what they're doing. But these guys in the Taliban have also figured out ways to evade this.

Without giving away too much, what are the crazier stories or the craziest story you will show the viewers?

We got some pretty unprecedented insights into the DNC hack. And I'm looking forward to dropping that episode so people can see what we found because I'm not sure that a lot of the information that we found out is out there. I'm not sure anyone's gotten closer than us to what happened. I can tell you I'm definitely not eager to go back to Russia after this episode drops.

What what was the biggest challenge you faced in reporting these new episodes?

Like for every other cybersecurity reporter or cybersecurity reporting team, the biggest problem is trying to convince any of these people to go on camera, or even trying to convince them to speak to you on secure chat. This is a difficult process. But luckily my

team and I have established a very good reputation within the hacking community, whether it's black hat hackers or the government or everything else in between.

Did you ever think someone was spying or hacking you or your team? Can you talk a little bit about that and what you did to avoid it?

Yeah, definitely. For example in Russia. I had some sort of confirmation that I was being tracked by the [intelligence agency and KGB's heir] FSB for various reasons but I certainly think that they were interested in what I was doing while I was there. What I did to counter that was use all sorts of methods. The biggest one was staying off the internet. Staying offline, using burner phones, sending encrypted emails and stuff like that. The biggest one was keeping a lot of our chats, both among our team and with our sources, completely offline. Everything was done while we were in country, and as limited as possible.

The fact of the matter is that the entire internet telecommunications infrastructure in Russia is owned by the government so it's really difficult to securely communicate with people without taking some serious risks.

There's a lot of different things you can do but if a nation state really wants you and wants your information they're likely going to get it.

You expect that kind of surveillance in Russia, but was there a place that surprised you?

I always knew in Pakistan that the ISI was a very powerful, insidious intelligence agency. but I didn't realize how feared they were in Pakistan. If you said the word ISI it was like saying the name of the boogeyman to people. At one point we found that they wanted to talk to us about what we were doing, they were going to send a representative and then they didn't. And we just assumed at that point that there was clearly a message being sent to us, to kinda watch the fuck out. Interestingly, I took the same precautions I took in Russia, we did almost everything the same way.

What was the most fun story to report on?

Mexico was pretty fun, it was pretty rad. Mexico is a very interesting country and there's a lot of interesting things going on in cyber both on the government and cartel level. And it's not a widely reported issue except for the revelations that just came out in June [when *The New York Times* and groups of digital rights activists revealed how the Mexican government uses spyware to keep tabs on politicians, human rights activists, and journalists]. It's interesting to see the tentacles of the cartels, the government, and then you add the CIA and how they operate in Mexico. It's a really fascinating country.

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