

Changemaker Challenge winners reach out to those expressing thoughts of suicide on social media

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Expressions of suicidal thinking or intent should never be ignored. But what happens when a message of desperation is lost in the noise of internet chatter?

[ARKHumanity](#) – which came about at a hackathon co-sponsored by ASU – was inspired by this question and developed technology that scans Twitter for messages that suggest a risk of self-harm and connects the author with immediate support. The project has won the [Arizona State University Changemaker Challenge's](#) top prize of \$10,000 seed money.



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Two facts drove the creation of ARKHumanity: In the U.S., one person dies by suicide on average every 13.3 minutes, and the incidence of suicide lowers when someone takes an empathetic interest and cares about a person's well-being when he or she is in crisis. ARKHumanity extends this effort further by connecting people to resources such as a lifeline chat or hotline.

"It is an unfortunate reality that messages indicating distress in social media often receive no reply. This failure to respond can greatly exacerbate feelings of worthlessness and isolation that contribute to suicidal thinking," said Jordan Bates,

ARKHumanity's team leader and an ASU doctoral student. "Technology is rapidly changing how we interact, and we should make sure we don't lose our humanity along the way. Every person matters. No call for help should go unanswered."

The \$10,000 prize from Changemaker Challenge will significantly help the project by covering server costs, legal expenses and conference presentations to introduce it to local, state and national organizations. The group's goal is to make the technology available to select mental-health professionals by October 2015 and to update the technology as necessary to be able to expand response capacity. Ultimately, the team wants to develop an impactful platform that can be adopted by mental-health organizations locally and globally.

Kelli Donley, project manager and suicide prevention coordinator for the Arizona Department of Health Services, is a community supporter of the project.

"This technology is greatly needed to identify the warning language often used as cries for help before suicide attempts," Donley said. "Using social media to identify suicidal ideations is a creative idea that should be supported."

ARKHumanity was conceived in September 2014 at the Hacks4Humanity hackathon, a 36-hour event co-sponsored by [ASU Project Humanities](#) and EqualityTV. The goal of the program was to engage creative thinkers, artists, programmers, designers and anyone interested in creating technologies for the greater good.

The five-member team of ASU graduate and undergraduate students and community members came from varying backgrounds. They had never met beforehand and worked together over the two-day period to develop a working prototype of the innovative technology. They also won first place in that competition.

Under the guidance of faculty mentor and Project Humanities director Neal Lester, the team entered



the Changemaker Challenge in November.

"This technology has proved an excellent demonstration of cross-disciplinary community-building and the impact that collaboration can and does have," Lester said. "The ARKHumanity team members have become very close."

The team says it's important to include the humanities when trying to solve social problems, and believes outreach cannot be automated and still have the same positive effects. Ultimately, people will be needed to review a flagged tweet to verify it needs a response, and then separate, trained responders to do the outreach from existing partner organizations.

Teen Lifeline, an Arizona crisis response hotline that also uses social media to reach its demographics and which is also rolling out a text-message lifeline, is on board as a community partner. In describing the value of ARKHumanity, Clinical Director of Teen Lifeline Nikki Kontz remarked, "With hundreds of millions of people online, this has high potential to save lives."

About the ARKHumanity team

Jordan Bates is a doctoral student at ASU in the Applied Mathematics for the Life and Social Sciences program. He is working with the Center for Policy Informatics and was a fellow at Data Science for Social Good in 2013. He received his B.S. in computer science from Purdue University.

Bin Hong Lee is an undergraduate student at ASU majoring in software engineering. He has served as a judge for the First Lego League series in 2014 and is a former member of the Global Shapers Community Georgetown Penang.

Pat Pataranutaporn is a first-year student majoring in biological sciences at ASU. He is a researcher at the Swette Center for Environmental Biotechnology and a member of the Gifted Young Scientist Society.

Ram Polur is an epidemiologist at the Office of Cancer Prevention and Control at the Arizona Department of Health Services. Ram has bachelor's in biology with a minor in biochemistry, a bachelor's in computer science with a minor in applied physics, and a Master of Public Health.

Kacie McCollum is the doctoral chair for the School of Advanced Studies and a faculty member for the College of Humanities and Sciences at the University of Phoenix. She is also the CEO of Shiny Bird Farms. She received her bachelor's in political science from Benedict College and her master's and doctor of education in STEP/curriculum design and instruction from the University of Massachusetts-Amherst.

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