

Silicon Valley 'Hackathon': Coders target deadly California wildfires

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Silicon Valley is not going to stop the next California inferno with computer code, but a small army of software developers got together in Fremont, Calif., recently to brainstorm new technology to cut the losses.

IBM's Call for Code Hackathon for California Wildfires drew some 200 developers to the campus of tuition-free engineering school 42 Silicon Valley for a team-based contest to create applications that could end up saving lives and property when communities are ravaged by flames.

Fremont Fire Department battalion chief Jeff Youngsma, on the anniversary of his 33rd year with the department, took the stage before the hacking began and noted that 85 people died in last fall's Camp Fire in Butte County that turned most of the town of Paradise to ash and smoking rubble.

"That's the stuff that keeps me awake at night, and what it is that we can do to try to reduce those numbers," Youngsma said.

This winter's [heavy rains](#) in Northern California spurred growth of grasses and shrubs that in many places are matted together up to 6 feet high, and are now beginning to dry in advance of this year's fire season, Youngsma said. "It's going to burn hotter, it's going to burn faster, and there are way more dead trees than it's ever been publicly known," he said. With climate change, he said, "our fire dangers are dramatically increasing."

Youngsma laid out top wildfire-response issues he hoped hackathon participants might address, starting with a notification system that would prevent a catastrophe such as occurred in Paradise, where many residents didn't find out about the fire until it was too late to escape it.

Also valuable would be software to track missing people, so agencies and shelter providers don't waste time searching for those already accounted for, he said. He said he would also like to see technology that would monitor [first responders](#)' core temperature, level of hydration and carbon monoxide exposure, as well as a platform that would allow [emergency services](#) and [health workers](#) to share encrypted patient reports between Android and Apple mobile operating systems.

The hackathon, running from 8 a.m. to 6 p.m., was part of IBM's Call for Code 2019 Global Challenge, which features software-development competitions around the world, with prizes of up to \$200,000 for the best innovations addressing natural disasters. Last year marked the first Call for Code challenge, and the winning project—a mobile-communications network using small nodes resembling rubber duckies, to connect disaster victims and first responders when other systems are down—is being field tested in Puerto Rico ahead of hurricane season.

Participants at the Fremont event were vying for smaller prizes, but were encouraged to continue the projects they started and submit them to this year's Call for Code Challenge. Proposals are due by July 29.

"There's an incredible amount of talent here," said Shari Chiara, IBM's chief operations manager for the Call for Code program.

Among that talent was Coco Matthey, a Palo Alto software engineer and mother of two, who was driven to attend the event in part by the proximity of the Camp Fire to the Bay Area. "It was so close. You smell the smoke. You see it in the sky. It's different from seeing the news,"

Matthey said. "This way, I feel I can do something."

She and two others on her team were brainstorming about what problem to solve through coding, and by 11 a.m. were leaning toward developing software to help the agencies that aid [fire](#) victims—such as the United Way—quickly confirm whether a person's home has burned.

Silicon Valley's technology industry has contributed to the sprawl that has made wildfires more dangerous to people, Matthey said.

"Our world is changing," she said. "Technology has caused these problems. Technology can be a solution. It can be a complete circle."

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