

Picture it: Facial recognition to find lost dogs

August 6 2014, by Sue Manning



This undated illustration provided by FindingRover.com shows how a new smart phone application Finding Rover works. In May, San Diego County Animal Services became the first shelter system in the country to adapt the facial recognition plan. Every dog entering the county's three shelters will be put in the database. (AP Photo/FindingRover.com)

Any worried pet owner who has spent days hanging posters, making phone calls and knocking on neighbors' doors hopes there's a more scientific way to find a lost dog.

That became a reality when [facial recognition technology](#) successfully reunited a pet at San Diego County Animal Services with its owners. Joanne Cox's family in San Diego turned to FindingRover.com, a website and app that uses technology built by university researchers, to

reconnect with their dog Roxy, a Shiba inu.

The website keeps a database of photos from the three county shelters and tries to match eight distinctive facial markers on dogs with images uploaded by users searching for lost pets. Eyes and noses are important areas that differentiate pooches, including eye size and their position near the snout.

FindingRover.com founder John Polimeno wants to expand the photo database to improve the odds of more happy endings, with shelters elsewhere set to sign on. He's also showing it to rescues, veterinarians and dog groups and is visiting other countries.

The website is unique in using facial recognition but stands among many online tools people increasingly use to find lost pets. There are alarm systems, [social media](#) alerts and apps that post rewards or call people in neighborhoods.

Plus, the American Society for the Prevention of Cruelty to Animals, the largest and oldest humane society in the U.S., has its own mobile app for recovering missing pets. It offers tips on the best ways to search and allows users to create a digital flier to share on social media.

"Through research, the ASPCA has found that the best method for pet owners to find their lost pet is to get out the door, search their neighborhood, post flyers, check their local shelters and make sure that their pets have ID tags with updated information," said Dr. Emily Weiss, vice president of ASPCA shelter research and development.

Facial recognition worked for the Cox family after Roxy bolted during a thunderstorm in late July. Five days after the dog disappeared, the family's 10-year-old daughter created a free Finding Rover account and the technology matched her uploaded photo to one taken at the shelter.



This May 16, 2014 photo provided by FindingRover.com shows founder of the smart phone application Finding Rover John Polimeno during a news conference in San Diego. In May, San Diego County Animal Services became the first shelter system in the country to adapt the facial recognition plan. Every dog entering the county's three shelters will be put in the database. (AP Photo/FindingRover.com)

"Within four hours of her arrival to the shelter, we were there to pick her up," Joanna Cox said in an email.

Every dog entering San Diego County's three shelters is added to the photo database. Daniel deSousa, the system's deputy director, says the program can work two ways:

— Someone finds a dog, takes its picture and sends it to the database, where a match generates a notice to the owner. The owner then can call the good Samaritan and arrange a pickup.

— Dogs coming in to the shelters have their photos run against the database. If there's a match, the owner gets a call.

The technology powering Finding Rover was built by Steven Callahan and John Schreiner of the University of Utah's software development center. They found the eight markers on dogs are far fewer than the 128 points on the human [facial recognition](#) program.

"People are sort of uniform, the shape of their faces, skin tones, all their eyes, noses and mouths are in the same general location," Callahan said. But dogs' eyes and snouts are in different places.

It's difficult to measure accuracy, Callahan said, but if there are 100 dogs in a database, a top-three match would be hit 98 percent of the time.

"It worked surprisingly well, better than I thought it would. I had low expectations," Callahan said. "It would take off if you had all the shelters in an area" included.

More information: — www.findingrover.com

— www.sddac.com

— www.tvc.utah.edu/sdc

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