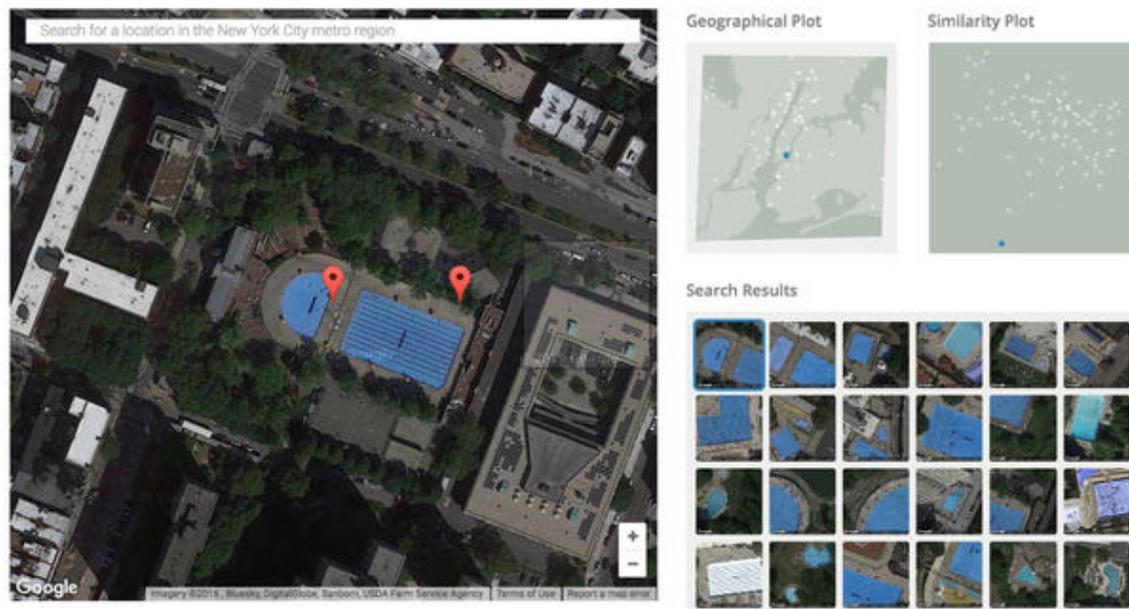


# Google Maps meets AI: Carnegie Mellon's Terrapattern can find and map every pool in New York City - TechRepublic



Selection of pools in New York City area

Image: screenshot, Terrapattern.com

A group of students and professors at Carnegie Mellon recently unveiled an AI tool that scans satellite photos and matches the images to similar-looking locations in the nearby geographic area. While image recognition using AI is nothing new—machine learning techniques are frequently used to identify, classify, and categorize objects, and even faces, from pools of millions of photos—the new tool called [Terrapattern](#) offers something unique: The ability to pinpoint the GPS coordinates of similar landmarks.

So, how does it work? You simply click part of a Google map, (currently, you can choose between New York City, San Francisco, Pittsburgh, and Detroit—presumably, it isn't too difficult to add new cities to the list), and the program spits out every other similar-looking geographic area in the region, as well as places the pins on a map. It does this by using a relatively low level of detail, looking at areas that are similar in terms of color, or shape.

The tool, which was created through a grant in Media Innovation from the [Knight Foundation Prototype Fund](#), offers many uses at a personal level. Want to find an apartment near a lake? Or a school near a baseball field? You can use the tool to scan for these objects all over the city.

What else could the tool be used for? It may, one day, enable a route planner for autonomous vehicles. If, for example, you preferred driving near the coast, or wanted to avoid bridges, the features could potentially help map a route based on images, rather than going strictly by fastest route.

According to Manuela Veloso, head of Carnegie Mellon's Machine Learning Department, the program offers a valuable addition to current image recognition technology. On top of being novel, she said, "it's also extremely compelling, at the performance level. Imagine how many millions and trillions of images exist, and how much computing processing it takes to search this tremendous amount of data effectively."

And, beyond personal interest in parks or schools, Terrapattern has a plethora of uses in other areas as well. Imagine the world of statistics and data, for instance. The tool could be used not to find a pool for you to live near, but how many pools there are in a certain city. And what part of town they're in. And, perhaps, how run-down they look.

This kind of information could be relevant to all kinds of people and businesses. Sociologists. People doing inventory. Governments researching poverty or economics of a location. Developers who are planning new apartment complexes, or urban infrastructure.

Through this tool, Veloso said, "we can understand the dynamics of a region. How are things changing? Are there more tennis courts? Is the population getting richer? The images capture the economics of the country."

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