Terrapattern is the first open-access visual search engine for satellite maps

Machine learning is everywhere

By Micah Singleton on May 27, 2016 12:19 pm

Terrapattern is a amazing visual search engine for satellite imagery, and somehow the first of its kind. It's very easy to use, click on a section of the map, and Terrapattern will show you all similar geographical features or landmarks in the area. A football field, bus station, outdoor pool — it doesn't matter, Terrapattern can pinpoint the related image and location with surprising accuracy.
The program was created by Golan Levin, David Newbury, and Kyle McDonald, with funding from the John S. and James L. Knight Foundation. Terrapattern is built on a Deep Convolutional Neural Network (DCNN), and has been trained to recognize geographical features within small squares in four cities — New York, San Francisco, Pittsburgh, and Detroit.

In an interview with *Popular Science*, Levin said he and the team built Terrapattern to open up the visual mapping search to a larger audience (the US Military has had similar tech for years), and hopes that it would eventually make it into other mapping platforms like Google Maps. "I wanted a way we could open this technology to everyone: citizen scientists, journalists and artists, or just everyday people who want to understand the world in a better way," Levin said.

You can test out Terrapattern here and check out the code on GitHub.