



NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

Office of Corporate Communications

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NGA challenge offers \$50K for AI solutions to detect circles in satellite imagery

SPRINGFIELD, Virginia. – The National Geospatial-Intelligence Agency is offering \$50,000 in prizes for artificial intelligence solutions designed to help detect circles in satellite images.

As part of the Circle Finder challenge NGA is looking for novel automated approaches to help detect, delineate and describe circular shaped features using satellite images. These features vary in size and physical composition. Examples include agricultural irrigation areas, fuel storage tanks, buildings, traffic circles and fountains.

AI detection algorithms currently require large volumes of data to define a single discrete object. While AI algorithms are maturing, it is still difficult for machines to accurately define specific shapes within an image scene, said Jack Brandy, GEOINT Capabilities Integration Officer at NGA.

“This particular challenge is difficult because many circular features are not going to be perfectly circular nor similar in size,” said Brandy. “Portions might be jagged edges, but are otherwise part of a circle. Or circles may be disrupted or obscured by other objects or materials. The difficulty lies in an algorithm’s ability to properly identify any size circular object while rejecting obfuscating elements that could prevent proper detection.”

The Circle Finder challenge is available on circlefinderchallenge.com. Submission requirements are also provided on the site.

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NGA delivers world-class geospatial intelligence that provides a decisive advantage to policymakers, warfighters, intelligence professionals and first responders.

NGA is a unique combination of intelligence agency and combat support agency. It is the world leader in timely, relevant, accurate and actionable geospatial intelligence. NGA enables the U.S. intelligence community and the Department of Defense to fulfill the president's national security priorities to protect the nation.

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