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Case Western Reserve announces new partnership with Microsoft

Case Western Reserve University



Radiology professor Mark Griswold and his team will work with quantum computing experts at Microsoft Quantum on the new collaboration. The goal will be to "improve the practical ways that MRI machines acquire information during scans," according to a news release.

Central to the project is an approach called Magnetic Resonance Fingerprinting, which helps achieve faster and more accurate detection of diseases like cancer or multiple sclerosis. The release noted that Griswold and colleagues wrote about the method in a 2013 journal article and have been using it since. But the amount of data and the complex calculations it requires have held it back.

Quantum computing isn't limited to binary digits and can offer more computing power. The release stated that a calculation that could take today's computers years to complete could be finished within minutes or seconds with quantum computing. But the process is less stable than traditional computing, so its use hasn't been widespread. The release noted that Microsoft has announced a new approach that its experts expect to make the process more stable and reliable. The company expects to have working versions of this approach by the end of the year.

"We are thrilled to partner with Microsoft again on another project that expands our understanding of what technology can make possible," Griswold said in the release. "Quantum computing provides an opportunity to find the truly best way to scan patients. We are so excited to explore how far we can push these new quantum and quantum-inspired methods beyond traditional computer algorithms."

Ultimately, the team plans to create a 3D holographic model of a scan's results, drawing on an earlier collaboration between Microsoft and Case Western Reserve, along with the Cleveland Clinic, on the [HoloLens project](#), which lets people interact with holograms.

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