

## Documenting and Triaging Cultural Heritage (DATCH) Project

[datchucf.org](http://datchucf.org)

Scott Branting  
Associate Professor

Lori C. Walters  
Research Associate Professor

Joseph T. Kider Jr.  
Assistant Professor

The DATCH Project has developed prototype software using the cross-platform Unity game engine that leverages the unique capabilities of augmented reality headsets to allow users to create and view in real-time, using only their gaze and simple hand gestures, to scale 3D drawings of real-world physical objects.



We used a Microsoft HoloLens as the development platform for the prototype, but our use of Unity allows the DATCH software to be used across different augmented reality hardware. Users can create and edit 3D points, polylines, spline curves, polygons, and polygon fills that can represent elements such as stones, walls, layers of soil or rock, or individual objects. The points, lines, and polygons appear as if overlain on top of the real-world objects they represent. This allows field scientists to both digitally draw in 3D and interact with the objects in real-time - greatly speeding up field recording practices. In addition, the project tested the importation and overlay of previously created data into the augmented reality headset. This allows users to compare earlier drawings of objects to their current state in the field in real-time. For applications such as cultural heritage monitoring, this will speed up the documentation and analysis of change that has occurred to that heritage element over time. The DATCH software is freely available for you at: [github.com/datch-ucf](https://github.com/datch-ucf)

