

**Research Project:** Augmented Reality Visualization of Point Cloud Datasets  
**Faculty Mentor:** Kyle Johnsen, College of Engineering ([kjohnsen@uga.edu](mailto:kjohnsen@uga.edu))  
**Area of Expertise:** Virtual and Augmented Reality, Human-Computer Interaction  
**Student Background:** Computer Engineering, Computer Science  
**Laboratory Website:** <https://vel.engr.uga.edu>



Dr. Johnsen is looking for students to design new visualization tools that allow point clouds to be visualized in augmented reality, such that the point clouds can be viewed within the spaces they were captured from (e.g., for plant-level scans) or can be used for planning (e.g. for field-level scans). This tool will enable the rapid comparison and validation of point cloud datasets and will allow for annotations to be created in external tools and merged with the real environments. Students will evaluate multiple hardware and software interfaces and will explore collaborative features that support multiple viewers of point clouds simultaneously.

