

This presentation will detail research done for the Wildlife@Home and Open UAS Repository projects. Wildlife@Home is an NSF funded project which combines both citizen science and volunteer computing to analyze a massive data sets including over 120,000 hours of uncontrolled outdoor avian nesting video, 2 million trail camera images, and mosaics from over 3 years of unmanned aerial surveys. The talk will discuss strategies used to obtain training data from volunteer citizen scientists, how well they compare to trained biologists, and how this data was used to train convolutional neural networks to automate wildlife detection. It will conclude with recent research in the development of the Open UAS Repository, which aims to provide a sharable cloud based resource for manual and automated analysis of unmanned aerial systems imagery.