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## Techniques for semi-automated VOB Object Detection

Visual observation (VOB) is a central tenet for identifying changes that could be related to nuclear detonations and is conducted during all phases of On-Site Inspection (OSI). There are many objects, signatures, and landscape changes indicative of testing activities that are visible at different scales. What is identified as a possible signature from the ground, overflights, and satellite remote sensing varies greatly. Additionally, inspectors will have differing amounts of experience in identifying important signatures. This can be especially problematic when there is a large amount of imagery or visual data to parse while looking for signatures of interest. Using machine-learning based object detection paired with identification techniques, we present initial examples of a method for semi-automated detection of objects of interest, which could be used to assist inspectors.

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