Basic Computer Vision Change Detection Report

Executive Summary

The Basic Computer Vision method processed satellite imagery and detected 220,665 pixels of change across 353 distinct regions, representing 23.53% of the total image area. Processing completed in 0.063 seconds.

Method Description

This method uses traditional computer vision techniques including image differencing, Gaussian blur filtering, and morphological operations to detect changes between two satellite images. It applies threshold-based segmentation and contour detection to identify change regions. This approach is computationally efficient and provides reliable results for clear, high-contrast changes.

Results Summary

Metric	Value
Total Change Pixels	220,665
Number of Change Regions	353
Total Change Area	220665.00 sq units
Processing Time	0.063 seconds
Image Dimensions	1024 x 916
Average Confidence	N/A

Change Statistics

Region Size Analysis:

- Largest region: 20,325 pixels
- Smallest region: 100 pixels
- Average region size: 527 pixels
- Median region size: 231 pixels

Top 5 Largest Change Regions:

Region ID	Area (pixels)	Confidence	Center (x, y)
598	20,325	1.000	(849, 439)
429	7,149	1.000	(491, 243)
1092	6,329	1.000	(729, 643)
981	6,223	1.000	(718, 522)
103	5,972	1.000	(290, 90)

Technical Details

Parameter	Value
Implementation	Basic Computer Vision
Version	1.0
Timestamp	2025-08-24 19:51:14
Input Image 1	orlando2010.png
Input Image 2	orlando2023.png
threshold_method	otsu
blur_kernel	(5, 5)
morphology_kernel	(3, 3)
min_area	100

Visualizations

Basic Computer Vision - Change Detection Results

Report generated on 2025-08-24 19:51:16