Change Detection Methods Comparison Report

Executive Summary

This report compares 3 change detection methods: Basic Computer Vision, Advanced Computer Vision, Deep Learning Inspired. The fastest method was Basic Computer Vision (0.055s), while Advanced Computer Vision detected the most changes (877,507 pixels). The overall agreement between methods is low.

Methods Overview

Method	Change Pixels	Regions	Processing Time (s)	Avg Confidence
Basic Computer Vision	220,665	353	0.055	N/A
Advanced Computer Vision	877,507	1	0.057	0.164
Deep Learning Inspired	200,487	207	0.305	0.402

Performance Comparison

Method	Speed Rank	Change Detection Rank	Overall Score
Basic Computer Vision	#1	#2	1.5
Advanced Computer Vision	#2	#1	1.5
Deep Learning Inspired	#3	#3	3.0

Inter-Method Agreement

Overall Agreement Metrics:

- Mean IoU: 0.322
- Mean Jaccard Similarity: 0.322
- Agreement Level: Low

Consensus Analysis:

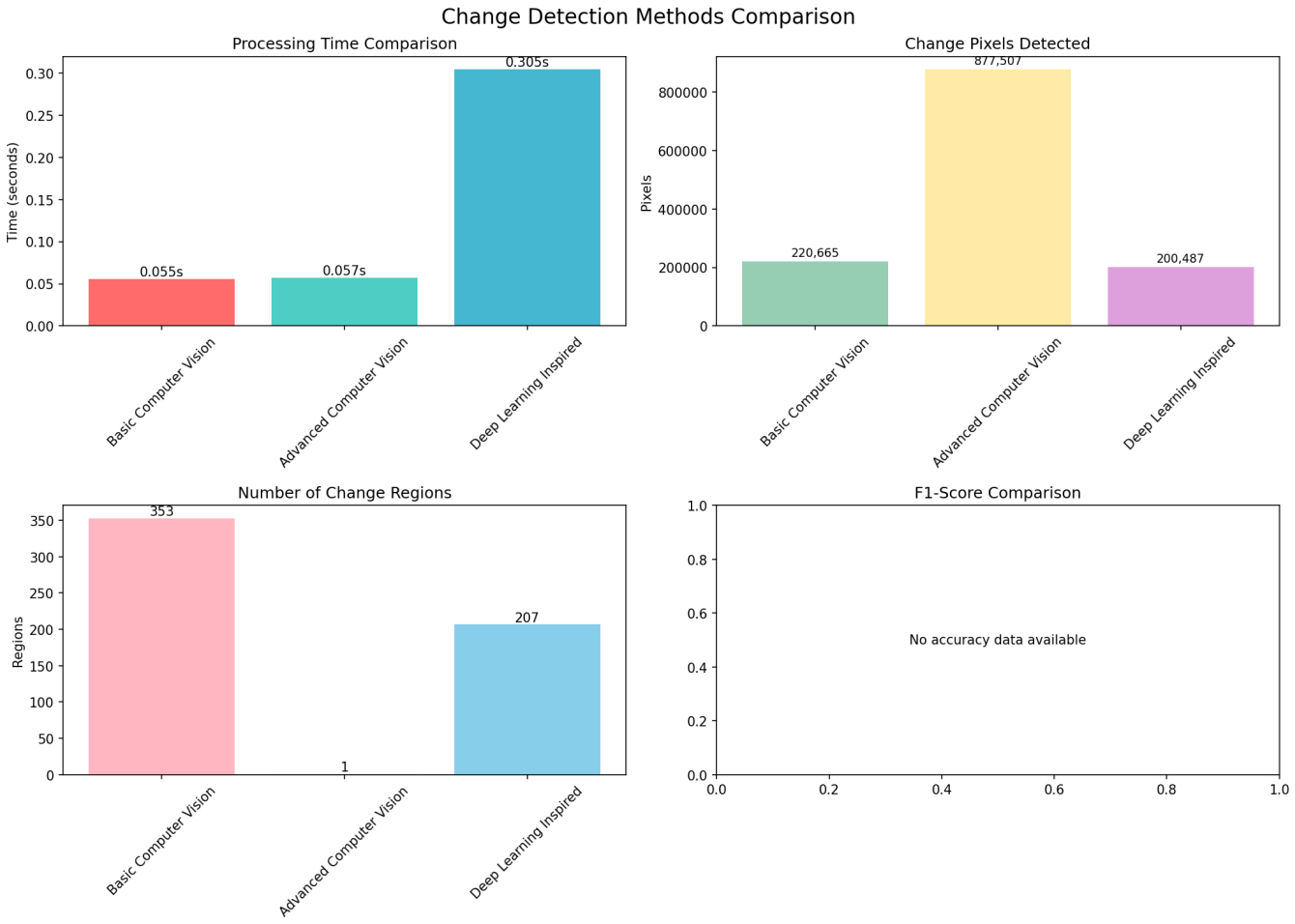
- Full Agreement: 20.1% of pixels
- Partial Agreement: 749,117 pixels

- Consensus Mean: 0.462

Recommendations

For fastest processing, use Basic Computer Vision. For maximum sensitivity, use Advanced Computer Vision. Consider using multiple methods and ensemble voting due to low agreement.

Comparison Visualizations



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