Project Title: ANOMALY DETECTION IN COLLEGE ENVIRONMENT

Quantitative Metrics

Feature detection quantitative metrics	SIFT	SURF	GLOH	Harris Corner
Image 1				
Keypoints Detected	471	465	641	75005
Coverage	100 %	100 %	0.015 %	75.0 %
Image 2				
Keypoints Detected	641	313	471	324
Coverage	3.27 %	1.20 %	0.005 %	92.0 %
Image 3				
Keypoints Detected	1099	8723	1199	7382
Coverage	5.32 %	0.60 %	0.00 %	100 %
Image 4				
Keypoints Detected	1782	873	1847	547
Coverage	1.13 %	22.0 %	0.02 %	43.06 %
Image 5				
Keypoints Detected	3131	313	3234	4584
Coverage	40.31 %	78.7 %	20.22 %	43.23 %

Optical Flow Metrics

Video Type	Optical Flow Type	EPE	AAE
Fast	Dense	0.603	0.081
	Sparse	0.00305	6.255e-05
Medium	Dense	2.001	0.788
	Sparse	0.00563	6.345e-06
Slow	Dense	0.0342	0.0231

Computer Vision Classifiers

Classifier Accuracy Metrics	CNN	SVM
Accuracy	0.66	0.50
Precision	0.67	0.41
Recall	0.66	0.40
F1-Score	0.67	0.49

Morphological Operations

Operation	% White Pixels (Original)	% White Pixels (Modified)	% Increase	PSNR (dB)
Erosion	41.59%	52.36%	-8.94%	9.89
Dilation	41.59%	55.05%	34.23%	13.54
Opening	41.59%	68.24%	-12.5%	17.90
Closing	41.59%	40.49%	9.32%	11.34