Homework 3 Report

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Environment

Programming Environment:
Python 3.11.3
numpy 1.23.5
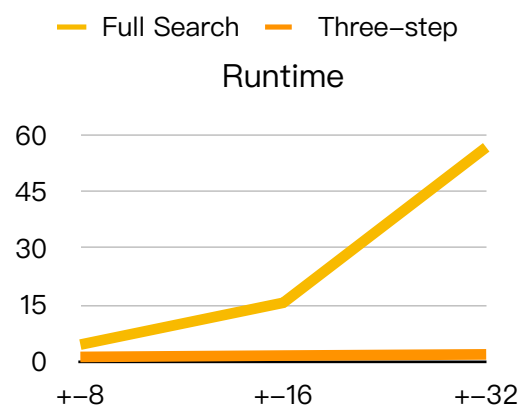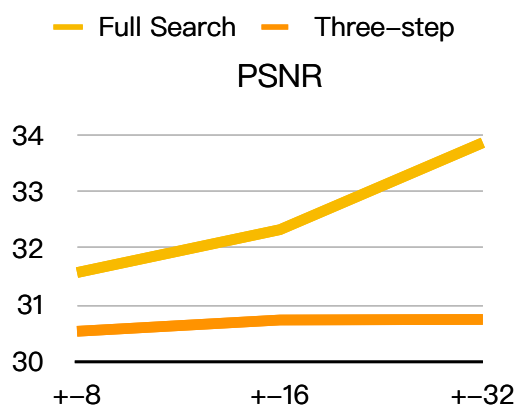opencv–contrib–python 4.7.0.72

Execution Command:
python3 main.py

Experiments Results

PSNR & Runtime Comparison
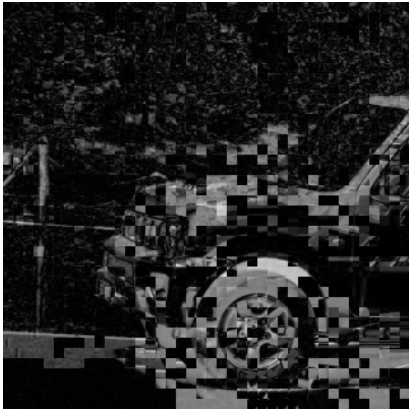
	Search Range +–8		Search Range +–16		Search Range +–32	
	PSNR	Runtime (s)	PSNR	Runtime (s)	PSNR	Runtime (s)
Full Search	31.57	4.41	32.33	15.53	33.87	56.82
Three–step Search	30.53	1.14	30.73	1.5	30.74	1.82

PSNR & Runtime Plot

Result Images

	Reconstructed frame	Residual image
Full Search Search Range +− 8		
Full Search Search Range +− 16		
Full Search Search Range +− 32		

	Reconstructed frame	Residual image
Three–step Search Search Range +– 8		
Three–step Search Search Range +– 16		
Three–step Search Search Range +– 32		