

# Test Results Summary

## Successful Test Cases

in_channels	out_channels	kernel_size	stride	padding	output_sum_diff	nnz_cpp_result	nnz_torch_eval	nnz_torch_cpp
1	16	1	1	0	2.514570951461792e-08	2768	2768	2768
1	16	1	1	1	4.936009645462036e-08	2048	2048	2048
1	16	2	1	0	1.1548399925231934e-07	9280	9280	9280
1	16	2	1	1	-1.4528632164001465e-07	8496	8496	8496
1	16	3	1	0	3.4458935260772705e-08	18064	18064	18064
1	16	3	1	1	1.8998980522155762e-07	18400	18400	18400
1	32	1	1	0	-1.210719347000122e-08	4224	4224	4224
1	32	1	1	1	-6.658956408500671e-08	3712	3712	3712
1	32	2	1	0	-3.91155481338501e-08	16896	16896	16896
1	32	2	1	1	-1.1175870895385742e-08	18560	18560	18560
1	32	3	1	0	-2.8312206268310547e-07	35936	35936	35936
1	32	3	1	1	1.1548399925231934e-07	36608	36608	36608
32	16	1	1	0	-1.7881393432617188e-07	63152	63152	63152
32	16	1	1	1	-3.725290298461914e-08	62864	62864	62864
32	16	2	1	0	-2.2351741790771484e-07	173344	173344	173344
32	16	2	1	1	-1.3783574104309082e-06	183440	183440	183440
32	16	3	1	0	-2.384185791015625e-07	228432	228432	228432
32	16	3	1	1	-5.066394805908203e-07	248928	248928	248928
32	32	1	1	0	-2.8312206268310547e-07	127360	127360	127360
32	32	1	1	1	2.5331974029541016e-07	128352	128352	128352
32	32	2	1	0	1.8998980522155762e-07	349184	349184	349184
32	32	2	1	1	-2.2351741790771484e-07	368672	368672	368672
32	32	3	1	0	1.4901161193847656e-06	463968	463968	463968
32	32	3	1	1	-2.9802322387695312e-08	501120	501120	501120
1	16	1	1	0	1.825392246246338e-07	23376	23376	23376
1	16	1	1	1	2.384185791015625e-07	22288	22288	22288
1	16	2	1	0	-1.9371509552001953e-07	82272	82272	82272
1	16	2	1	1	-2.421438694000244e-07	84672	84672	84672
1	16	3	1	0	6.109476089477539e-07	183120	183120	183120

1	16	3	1	1	-7.003545761108398e-07	195968	195968	
1	32	1	1	0	-2.905726432800293e-07	45696	45696	
1	32	1	1	1	-2.0489096641540527e-07	43712	43712	
1	32	2	1	0	1.3783574104309082e-07	170464	170464	
1	32	2	1	1	2.849847078323364e-07	181152	181152	
1	32	3	1	0	5.960464477539063e-08	373792	373792	
1	32	3	1	1	2.0489096641540527e-07	394368	394368	
32	16	1	1	0	8.642673492431641e-07	638944	638944	
32	16	1	1	1	-8.642673492431641e-07	640928	640928	
32	16	2	1	0	-1.1175870895385742e-06	1728736	1728736	
32	16	2	1	1	-8.344650268554688e-07	1842928	1842928	
32	16	3	1	0	-8.344650268554688e-07	2307776	2307776	
32	16	3	1	1	-9.5367431640625e-07	2510432	2510432	
32	32	1	1	0	2.682209014892578e-07	1274688	1274688	
32	32	1	1	1	-4.470348358154297e-07	1278944	1278944	
32	32	2	1	0	1.9073486328125e-06	3449056	3449056	
32	32	2	1	1	-3.5762786865234375e-06	3660768	3660768	
32	32	3	1	0	2.7418136596679688e-06	4624672	4624672	
32	32	3	1	1	5.960464477539063e-08	5025056	5025056	

### Failed Test Cases

in_channels	out_channels	kernel_size	stride	padding	output_sum_diff	nnz_cpp_result	nnz_torch_eval	nnz_torch_gold
1	16	1	2	0	0.7021881341934204	2288	592	
1	16	1	2	1	0.3651781380176544	2080	576	
1	16	2	2	0	-0.16128063201904297	4448	2256	
1	16	2	2	1	-0.43152719736099243	4560	2112	
1	16	3	2	0	-0.0566292479634285	7920	4704	
1	16	3	2	1	-0.03418858349323273	8016	4624	
1	32	1	2	0	-0.4320717453956604	4832	1280	
1	32	1	2	1	-0.039839208126068115	4992	1120	
1	32	2	2	0	0.2541143298149109	8960	4000	
1	32	2	2	1	-0.2641303539276123	10816	4448	
1	32	3	2	0	1.2162957191467285	16096	9056	
1	32	3	2	1	-1.880796194076538	15648	9120	

32	16	1	2	0	-1.2803881168365479	45120	15360	
32	16	1	2	1	2.339843273162842	46096	15888	
32	16	2	2	0	1.0378429889678955	62432	44960	
32	16	2	2	1	1.9784281253814697	67136	47088	
32	16	3	2	0	6.565918922424316	63152	58160	
32	16	3	2	1	-3.780818462371826	68928	62704	
32	32	1	2	0	0.3182179927825928	92000	33344	
32	32	1	2	1	0.19564288854599	94528	33696	
32	32	2	2	0	0.3838813900947571	124992	90912	
32	32	2	2	1	-1.2023870944976807	131744	92224	
32	32	3	2	0	-9.272660255432129	125728	116160	
32	32	3	2	1	1.2748466730117798	138496	126944	
1	16	1	2	0	1.0466907024383545	23072	5600	
1	16	1	2	1	0.3881438970565796	21600	5216	
1	16	2	2	0	-0.2093294858932495	46816	21760	
1	16	2	2	1	0.04558283090591431	48176	22032	
1	16	3	2	0	-2.0818822383880615	76208	42928	
1	16	3	2	1	2.1086368560791016	79904	45632	
1	32	1	2	0	-0.0341452956199646	45152	11424	
1	32	1	2	1	0.023951224982738495	45472	10944	
1	32	2	2	0	-1.3496034145355225	93728	43648	
1	32	2	2	1	0.23838159441947937	101440	44832	
1	32	3	2	0	0.40606188774108887	157440	91712	
1	32	3	2	1	3.738457441329956	164032	95520	
32	16	1	2	0	0.742663562297821	451200	156432	
32	16	1	2	1	3.6661295890808105	462928	158752	
32	16	2	2	0	-9.900106430053711	627104	452976	
32	16	2	2	1	2.614128589630127	662992	463456	
32	16	3	2	0	7.988638877868652	629168	576224	
32	16	3	2	1	-14.21040153503418	689280	623568	
32	32	1	2	0	-6.783827304840088	902944	319648	
32	32	1	2	1	3.0733816623687744	928576	317952	
32	32	2	2	0	0.18418478965759277	1253536	903776	
32	32	2	2	1	-3.140298843383789	1324192	925376	
32	32	3	2	0	14.377982139587402	1259424	1155936	

32	32	3	2	1	-21.573287963867188	1377760	1254304	
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**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.7021881341934204  
nnz Cpp Result: 2288  
nnz Torch Eval: 592

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 0.3651781380176544  
nnz Cpp Result: 2080  
nnz Torch Eval: 576

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: -0.16128063201904297  
nnz Cpp Result: 4448  
nnz Torch Eval: 2256

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: -0.43152719736099243  
nnz Cpp Result: 4560  
nnz Torch Eval: 2112

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: -0.0566292479634285  
nnz Cpp Result: 7920  
nnz Torch Eval: 4704

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: -0.03418858349323273  
nnz Cpp Result: 8016  
nnz Torch Eval: 4624

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: -0.4320717453956604  
nnz Cpp Result: 4832  
nnz Torch Eval: 1280

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: -0.039839208126068115  
nnz Cpp Result: 4992  
nnz Torch Eval: 1120

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 32

Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.2541143298149109  
nnz Cpp Result: 8960  
nnz Torch Eval: 4000

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: -0.2641303539276123  
nnz Cpp Result: 10816  
nnz Torch Eval: 4448

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: 1.2162957191467285  
nnz Cpp Result: 16096  
nnz Torch Eval: 9056

**Difference Detected:**

Batch Size: 10  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: -1.880796194076538  
nnz Cpp Result: 15648  
nnz Torch Eval: 9120

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: -1.2803881168365479

nnz Cpp Result: 45120  
nnz Torch Eval: 15360

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 2.339843273162842  
nnz Cpp Result: 46096  
nnz Torch Eval: 15888

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: 1.0378429889678955  
nnz Cpp Result: 62432  
nnz Torch Eval: 44960

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: 1.9784281253814697  
nnz Cpp Result: 67136  
nnz Torch Eval: 47088

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: 6.565918922424316  
nnz Cpp Result: 63152  
nnz Torch Eval: 58160

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: -3.780818462371826  
nnz Cpp Result: 68928  
nnz Torch Eval: 62704

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.3182179927825928  
nnz Cpp Result: 92000  
nnz Torch Eval: 33344

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 0.19564288854599  
nnz Cpp Result: 94528  
nnz Torch Eval: 33696

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.3838813900947571  
nnz Cpp Result: 124992  
nnz Torch Eval: 90912

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 32



Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: -1.2023870944976807  
nnz Cpp Result: 131744  
nnz Torch Eval: 92224

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: -9.272660255432129  
nnz Cpp Result: 125728  
nnz Torch Eval: 116160

**Difference Detected:**

Batch Size: 10  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: 1.2748466730117798  
nnz Cpp Result: 138496  
nnz Torch Eval: 126944

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: 1.0466907024383545  
nnz Cpp Result: 23072  
nnz Torch Eval: 5600

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 0.3881438970565796

nnz Cpp Result: 21600  
nnz Torch Eval: 5216

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: -0.2093294858932495  
nnz Cpp Result: 46816  
nnz Torch Eval: 21760

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: 0.04558283090591431  
nnz Cpp Result: 48176  
nnz Torch Eval: 22032

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: -2.0818822383880615  
nnz Cpp Result: 76208  
nnz Torch Eval: 42928

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: 2.1086368560791016  
nnz Cpp Result: 79904  
nnz Torch Eval: 45632

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: -0.0341452956199646  
nnz Cpp Result: 45152  
nnz Torch Eval: 11424

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 0.023951224982738495  
nnz Cpp Result: 45472  
nnz Torch Eval: 10944

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: -1.3496034145355225  
nnz Cpp Result: 93728  
nnz Torch Eval: 43648

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: 0.23838159441947937  
nnz Cpp Result: 101440  
nnz Torch Eval: 44832

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 32

Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.40606188774108887  
nnz Cpp Result: 157440  
nnz Torch Eval: 91712

**Difference Detected:**

Batch Size: 100  
Input Channels: 1  
Output Channels: 32  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: 3.738457441329956  
nnz Cpp Result: 164032  
nnz Torch Eval: 95520

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.742663562297821  
nnz Cpp Result: 451200  
nnz Torch Eval: 156432

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 3.6661295890808105  
nnz Cpp Result: 462928  
nnz Torch Eval: 158752

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: -9.900106430053711

nnz Cpp Result: 627104  
nnz Torch Eval: 452976

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: 2.614128589630127  
nnz Cpp Result: 662992  
nnz Torch Eval: 463456

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: 7.988638877868652  
nnz Cpp Result: 629168  
nnz Torch Eval: 576224

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 16  
Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: -14.21040153503418  
nnz Cpp Result: 689280  
nnz Torch Eval: 623568

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 0  
Output Sum Difference: -6.783827304840088  
nnz Cpp Result: 902944  
nnz Torch Eval: 319648

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 1  
Stride: 2  
Padding: 1  
Output Sum Difference: 3.0733816623687744  
nnz Cpp Result: 928576  
nnz Torch Eval: 317952

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 2  
Stride: 2  
Padding: 0  
Output Sum Difference: 0.18418478965759277  
nnz Cpp Result: 1253536  
nnz Torch Eval: 903776

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 2  
Stride: 2  
Padding: 1  
Output Sum Difference: -3.140298843383789  
nnz Cpp Result: 1324192  
nnz Torch Eval: 925376

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 32  
Kernel Size: 3  
Stride: 2  
Padding: 0  
Output Sum Difference: 14.377982139587402  
nnz Cpp Result: 1259424  
nnz Torch Eval: 1155936

**Difference Detected:**

Batch Size: 100  
Input Channels: 32  
Output Channels: 32

Kernel Size: 3  
Stride: 2  
Padding: 1  
Output Sum Difference: -21.573287963867188  
nnz Cpp Result: 1377760  
nnz Torch Eval: 1254304