

0.237	0.545	0.546	...
0.271	0.780	0.578	...
0.161	0.284	0.396	...
...

Output Skip Connection
(h1)

+

0.148	0.203	0.205	...
0.109	0.472	0.240	...
0.235	0.095	0.032	...
...

Output Konvolusi Terakhir
pada Blok Residual (f(h1))

→

0.385	0.748	0.751	...
0.380	1.252	0.818	...
0.396	0.379	0.428	...
...

Output Elementwise Addition

0.4434	0.589	0.558	0.6447	0.702	0.7593	0.8166	0.8739	0.9312
0.4044	0.5858	0.7672	0.9486	1.13	1.3114	1.4928	1.6742	1.8556
0.9072	0.5826	0.2581	-0.066	-0.391	-0.716	-1.04	-1.365	-1.689
0.5804	0.5795	0.5785	0.5776	0.5767	0.5758	0.5749	0.574	0.5731
...
0.5804	0.5731	0.5658	0.5585	0.5512	0.5439	0.5366	0.5293	0.522
0.9072	0.5699	0.2325	-0.105	-0.442	-0.779	-1.117	-1.454	-1.791
0.7178	0.5667	0.4155	0.2644	0.1132	-0.038	-0.189	-0.34	-0.491

Hasil Akhir Lapisan Konvolusi Pertama

→

Max Pooling

→

0.589027	0.76723	0.948624	1.130019	1.311413	1.492807	1.674201	1.855595
0.907216	0.76723	0.948624	1.130019	1.311413	1.492807	1.674201	1.855595
0.907216	0.582645	0.578541	0.577627	0.576713	0.575799	0.574886	0.573972
...
...
0.907216	0.573072	0.565777	0.558481	0.551185	0.54389	0.536594	0.529298
0.907216	0.569881	0.415536	0.264382	0.113228	-0.03793	-0.18908	-0.34023

Hasil Max Pooling

-0.29	-0.29	-0.29	-0.29	-0.29	-0.29	-0.29	-0.3	-0.3
-0.27	-0.29	-0.09	-0.19	-0.12	-0.05	0.016	0.086	0.155
-0.25	-0.11	0.022	0.157	0.292	0.427	0.562	0.697	0.833
-0.23	-0.3	-0.05	0.506	0.129	0.907	0.306	1.309	0.484
...
-0.18	0.064	0.193	0.401	0.59	0.777	0.97	2.348	1.342
-0.16	-0.3	0.277	-0.16	0.758	0.277	1.205	2.89	0.277
-0.14	-0.3	0.362	-0.14	0.926	0.362	1.44	3.433	0.362

Hasil Batch Normalization



ReLU



0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0.016	0.086	0.155
0	0	0.022	0.157	0.292	0.427	0.562	0.697	0.833
0	0	0	0.506	0.129	0.907	0.306	1.309	0.484
...
0	0.064	0.193	0.401	0.59	0.777	0.97	2.348	1.342
0	0	0.277	0	0.758	0.277	1.205	2.89	0.277
0	0	0.362	0	0.926	0.362	1.44	3.433	0.362

Hasil Akhir Lapisan Konvolusi Pertama

0.026	0.030	0.020	0.019	0.016	0.013	0.010	0.007	0.004
0.148	0.028	1.148	0.588	0.979	1.370	1.761	2.152	2.543
0.270	1.030	1.790	2.550	3.310	4.070	4.830	5.590	6.350
0.392	0.000	1.392	4.512	2.392	6.770	3.392	9.028	4.392
...
0.636	2.030	2.753	3.923	4.985	6.040	7.123	14.869	9.215
0.758	0.000	3.229	0.758	5.931	3.229	8.445	17.919	3.229
0.880	0.000	3.704	0.880	6.876	3.704	9.766	20.970	3.704

Output lapisan konvolusi pertama



Batch
Normalization



-0.29	-0.29	-0.29	-0.29	-0.29	-0.29	-0.29	-0.3	-0.3
-0.27	-0.29	-0.09	-0.19	-0.12	-0.05	0.016	0.086	0.155
-0.25	-0.11	0.022	0.157	0.292	0.427	0.562	0.697	0.833
-0.23	-0.3	-0.05	0.506	0.129	0.907	0.306	1.309	0.484
...
-0.18	0.064	0.193	0.401	0.59	0.777	0.97	2.348	1.342
-0.16	-0.3	0.277	-0.16	0.758	0.277	1.205	2.89	0.277
-0.14	-0.3	0.362	-0.14	0.926	0.362	1.44	3.433	0.362

Hasil Batch Normalization

-0.35	-0.35	-0.54	-0.68	-0.35	-0.57	-0.39	0.39	2.51	-0.72
-0.35	-0.42	-0.52	-0.68	-0.35	-0.67	-0.36	0.26	3.19	-0.72
-0.35	-0.53	-0.53	-0.68	-0.35	-0.69	-0.36	0.25	3.05	-0.72
-2.04	-0.08	-1.2	-0.88	-0.97	-1.76	1.18	0.2	-0.82	
...	
-0.43	-0.43	-0.49	-0.6	-0.56	-0.49	-0.39	0.45	3.19	-0.73
-0.26	-0.26	-0.43	-0.56	-0.58	-0.42	-0.39	0.43	3.6	-0.71
-0.35	-0.35	-0.47	-0.56	-0.58	-0.46	-0.38	0.4	3.05	-0.71

Input

X

0.02	-0.08	-0.05
0.03	0.025	-0.005
0.009	0.06	-0.003

Kernel 3x3



0.026	0.030	0.020	0.019	0.016	0.013	0.010	0.007	0.004
0.148	0.028	1.148	0.588	0.979	1.370	1.761	2.152	2.543
0.270	1.030	1.790	2.550	3.310	4.070	4.830	5.590	6.350
0.392	0.000	1.392	4.512	2.392	6.770	3.392	9.028	4.392
...
0.636	2.030	2.753	3.923	4.985	6.040	7.123	14.869	9.215
0.758	0.000	3.229	0.758	5.931	3.229	8.445	17.919	3.229
0.880	0.000	3.704	0.880	6.876	3.704	9.766	20.970	3.704

Output lapisan konvolusi pertama

-0.35	-0.35	-0.54	-0.68	-0.35	-0.57	-0.39	0.39	2.51	-0.72
-0.35	-0.42	-0.52	-0.68	-0.35	-0.67	-0.36	0.26	3.19	-0.72
-0.35	-0.53	-0.53	-0.68	-0.35	-0.69	-0.36	0.25	3.05	-0.72
-2.04	-0.08	-1.2	-0.88	-0.97	-1.76	1.18	0.2	-0.82	
...	
-0.43	-0.43	-0.49	-0.6	-0.56	-0.49	-0.39	0.45	3.19	-0.73
-0.26	-0.26	-0.43	-0.56	-0.58	-0.42	-0.39	0.43	3.6	-0.71
-0.35	-0.35	-0.47	-0.56	-0.58	-0.46	-0.38	0.4	3.05	-0.71

Input channel 3 dengan padding

X

-0.012	-0.062	0.04
0.066	0.043	-0.081
-0.022	0.038	0.014

Kernel 3x3

→

0.004	-0.023	0.012
0.022	-0.018	-0.020
-0.014	0.043	-0.007

Hasil konvolusi untuk titik (0,0)

↓

-0.002

Nilai untuk titik (0,0)

-0.35	-0.35	-0.54	-0.68	-0.35	-0.57	-0.39	0.39	2.51	-0.72
-0.35	-0.42	-0.52	-0.68	-0.35	-0.67	-0.36	0.26	3.19	-0.72
-0.35	-0.53	-0.53	-0.68	-0.35	-0.69	-0.36	0.25	3.05	-0.72
-2.04	-0.08	-1.2	-0.88	-0.97	-1.76	1.18	0.2	-0.82	
...	
-0.43	-0.43	-0.49	-0.6	-0.56	-0.49	-0.39	0.45	3.19	-0.73
-0.26	-0.26	-0.43	-0.56	-0.58	-0.42	-0.39	0.43	3.6	-0.71
-0.35	-0.35	-0.47	-0.56	-0.58	-0.46	-0.38	0.4	3.05	-0.71

Input channel 2 dengan padding

X

-0.027	0.000	0.009
0.004	0.023	0.027
0.025	-0.030	0.012

Kernel 3x3

→

-0.027	0.000	0.009
0.004	0.023	0.027
0.025	-0.030	0.012

Hasil konvolusi untuk titik (0,0)

↓

0.042

Nilai untuk titik (0,0)

-0.35	-0.35	-0.54	-0.68	-0.35	-0.57	-0.39	0.39	2.51	-0.72
-0.35	-0.42	-0.52	-0.68	-0.35	-0.67	-0.36	0.26	3.19	-0.72
-0.35	-0.53	-0.53	-0.68	-0.35	-0.69	-0.36	0.25	3.05	-0.72
-2.04	-0.08	-1.2	-0.88	-0.97	-1.76	1.18	0.2	-0.82	
...	
-0.43	-0.43	-0.49	-0.6	-0.56	-0.49	-0.39	0.45	3.19	-0.73
-0.26	-0.26	-0.43	-0.56	-0.58	-0.42	-0.39	0.43	3.6	-0.71
-0.35	-0.35	-0.47	-0.56	-0.58	-0.46	-0.38	0.4	3.05	-0.71

Input channel 1 dengan padding

X

0.02	-0.08	-0.05
0.03	0.025	-0.005
0.009	0.06	-0.003

Kernel 3x3

→

-0.007	-0.011	-0.005
0.028	-0.011	-0.031
0.018	0.003	0.002

Hasil konvolusi untuk titik (0,0)

↓

-0.014

Nilai untuk titik (0,0)