

Supplementary File

Table 1. Architecture AI of A Model

Layer	Activity	Dimension	Number of parameters
1	Convolution 2D	none, 1280, 1280, 64	640
	Max pooling	none, 640, 640, 64	0
2	Convolution 2D	none, 640, 640, 64	36,928
	Max pooling	none, 320, 320, 64	0
3	Convolution 2D	none, 320, 320, 64	36,928
	Up sampling	none, 640, 640, 64	0
4	Convolution 2D	none, 640, 640, 64	36,928
	Up sampling	none, 1280, 1280, 64	0
5	Convolution 2D	none, 1280, 1280, 3	1,731
Total Params			113,155
Trainable Params			113,155
Non-Trainable Params			0

Table S2. Architecture AI of B Model

Layer	Activity	Dimension	Number of parameters
1	Convolution 2D	none, 1280, 1280, 16	416
	Batch normalization	none, 1280, 1280, 16	64
	Activation	none, 1280, 1280, 16	0
2	Convolution 2D	none, 1280, 1280, 32	12,832
	Batch normalization	none, 1280, 1280, 32	128
	Activation	none, 1280, 1280, 32	0
3	Convolution 2D	none, 1280, 1280, 64	51,264
	Batch normalization	none, 1280, 1280, 64	256
	Activation	none, 1280, 1280, 64	0
4	Convolution 2D	none, 1280, 1280, 128	204,928

	Batch normalization	none, 1280, 1280, 128	512
	Activation	none, 1280, 1280, 128	0
5	Convolution 2D	none, 1280, 1280, 256	819,456
	Batch normalization	none, 1280, 1280, 256	1,024
	Activation	none, 1280, 1280, 256	0
6	Convolution 2D	none, 1280, 1280, 1	6,401
	Batch normalization	none, 1280, 1280, 1	4
	Activation	none, 1280, 1280, 1	0
Total params			1,097,285
Trainable params			1,096,291
Non-trainable params			994

Table S3. Architecture AI of C Model

Layer	Activity	Dimension	Number of parameters
1	Input layer	none, 1280, 1280, 1	0
	Convolution 2D	none, 1280, 1280, 32	320
	Batch normalization	none, 1280, 1280, 32	128
2	Convolution 2D	none, 1280, 1280, 32	9,248
	Batch normalization	none, 1280, 1280, 32	128
	Max pooling	none, 640, 640, 32	0
3	Convolution 2D	none, 640, 640, 64	18,496
	Batch normalization	none, 640, 640, 64	256
4	Convolution 2D	none, 640, 640, 64	36,928
	Batch normalization	none, 640, 640, 64	256
	Max pooling	none, 640, 640, 64	0
5	Convolution 2D	none, 320, 320, 256	147,712
	Batch normalization	none, 320, 320, 256	1,024
6	Convolution 2D	none, 320, 320, 256	598,880
	Batch normalization	none, 320, 320, 256	1,024

7	Convolution 2D	none, 320, 320, 64	147,520
	Batch normalization	none, 320, 320, 64	256
8	Convolution 2D	none, 320, 320, 64	36,928
	Batch normalization	none, 320, 320, 64	256
	Up sampling	none, 640, 640, 64	0
9	Convolution 2D	none, 640, 640, 32	18,464
	Batch normalization	none, 640, 640, 32	128
10	Convolution 2D	none, 640, 640, 32	9,248
	Batch normalization	none, 640, 640, 32	128
	Up sampling	none, 1280, 1280, 32	0
11	Convolution 2D	none, 1280, 1280, 1	289z
Total params			1,018,817
Trainable params			1,017,025
Non-trainable params			1,792

Table S4. Architecture AI of D Model

Layer	Activity	Dimension	Number of parameters
1	Input layer	none, 1280, 1280, 1	0
	Convolution 2D	none, 1280, 1280, 32	320
	Batch normalization	none, 1280, 1280, 32	128
2	Convolution 2D	none, 1280, 1280, 32	9,248
	Batch normalization	none, 1280, 1280, 32	128
	Max pooling	none, 640, 640, 32	0
3	Convolution 2D	none, 640, 640, 64	18,496
	Batch normalization	none, 640, 640, 64	256
4	Convolution 2D	none, 640, 640, 64	36,928
	Batch normalization	none, 640, 640, 64	256
	Max pooling	none, 320, 320, 64	0

5	Convolution 2D	none, 320, 320, 128	73,856
	Batch normalization	none, 320, 320, 128	512
6	Convolution 2D	none, 320, 320, 128	147,584
	Batch normalization	none, 320, 320, 128	512
7	Convolution 2D	none, 320, 320, 64	73,792
	Batch normalization	none, 320, 320, 64	256
8	Convolution 2D	none, 320, 320, 64	36,928
	Batch normalization	none, 320, 320, 64	256
	Up sampling	none, 640, 640, 64	0
9	Convolution 2D	none, 640, 640, 32	18,464
	Batch normalization	none, 640, 640, 32	128
10	Convolution 2D	none, 640, 640, 32	9,248
	Batch normalization	none, 640, 640, 32	128
	Up sampling	none, 1280, 1280, 32	0
11	Convolution 2D	none, 1280, 1280, 1	289
Total params			427,713
Trainable params			426,433
Non-trainable params			1,280

Table S5. Architecture AI of E Model

Layer	Activity	Dimension	Number of parameters
1	Input layer	none, 1280, 1280, 1	0
2	Convolution 2D	none, 1280, 1280, 3	320
3	Convolution 2D	none, 1280, 1280, 3	9,248
	Max pooling 2D	none, 640, 640, 32	0
4	Convolution 2D	none, 640, 640, 64	18,496
5	Convolution 2D	none, 640, 640, 64	36,928
	Max pooling 1D	none, 320, 320, 64	0

6	Convolution 2D	none, 320, 320, 128	73,856
7	Convolution 2D	none, 320, 320, 128	147,584
	Max pooling 2D	none, 160, 160, 128	0
8	Convolution 2D	none, 160, 160, 256	295,168
9	Convolution 2D	none, 160, 160, 256	590,080
	Max pooling 2D	none, 80, 80, 256	0
10	Convolution 2D	none, 80, 80, 512	1,180,160
11	Convolution 2D	none, 80, 80, 512	2,359,808
12	Convolution 2D Transpose	none, 160, 160, 256	524,544
	Concatenate	none, 320, 320, 256	0
13	Convolution 2D	none, 320, 320, 128	295,040
14	Convolution 2D	none, 320, 320, 128	147,584
15	Convolution 2D Transpose	none, 640, 640, 64	32,832
	Concatenate	none, 640, 640, 128	0
16	Convolution 2D	none, 640, 640, 64	73,792
17	Convolution 2D	none, 640, 640, 64	36,928
18	Convolution 2D Transpose	none, 1280, 1280, 3	8,224
	Concatenate	none, 1280, 1280, 6	0
19	Convolution 2D	none, 1280, 1280, 3	18,464
20	Convolution 2D	none, 1280, 1280, 3	9,248
21	Convolution 2D	none, 1280, 1280, 1	33
Total params			7,759,521
Trainable params			7,759,521
Non-trainable params			0
