\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Layer (type) Output Shape Param # Connected to

==================================================================================================

input\_2 (InputLayer) [(None, 224, 224, 3 0 []

)]

conv2d\_203 (Conv2D) (None, 111, 111, 32 864 ['input\_2[0][0]']

)

batch\_normalization\_203 (Batch (None, 111, 111, 32 96 ['conv2d\_203[0][0]']

Normalization) )

activation\_203 (Activation) (None, 111, 111, 32 0 ['batch\_normalization\_203[0][0]']

)

conv2d\_204 (Conv2D) (None, 109, 109, 32 9216 ['activation\_203[0][0]']

)

batch\_normalization\_204 (Batch (None, 109, 109, 32 96 ['conv2d\_204[0][0]']

Normalization) )

activation\_204 (Activation) (None, 109, 109, 32 0 ['batch\_normalization\_204[0][0]']

)

conv2d\_205 (Conv2D) (None, 109, 109, 64 18432 ['activation\_204[0][0]']

)

batch\_normalization\_205 (Batch (None, 109, 109, 64 192 ['conv2d\_205[0][0]']

Normalization) )

activation\_205 (Activation) (None, 109, 109, 64 0 ['batch\_normalization\_205[0][0]']

)

max\_pooling2d\_4 (MaxPooling2D) (None, 54, 54, 64) 0 ['activation\_205[0][0]']

conv2d\_206 (Conv2D) (None, 54, 54, 80) 5120 ['max\_pooling2d\_4[0][0]']

batch\_normalization\_206 (Batch (None, 54, 54, 80) 240 ['conv2d\_206[0][0]']

Normalization)

activation\_206 (Activation) (None, 54, 54, 80) 0 ['batch\_normalization\_206[0][0]']

conv2d\_207 (Conv2D) (None, 52, 52, 192) 138240 ['activation\_206[0][0]']

batch\_normalization\_207 (Batch (None, 52, 52, 192) 576 ['conv2d\_207[0][0]']

Normalization)

activation\_207 (Activation) (None, 52, 52, 192) 0 ['batch\_normalization\_207[0][0]']

max\_pooling2d\_5 (MaxPooling2D) (None, 25, 25, 192) 0 ['activation\_207[0][0]']

conv2d\_211 (Conv2D) (None, 25, 25, 64) 12288 ['max\_pooling2d\_5[0][0]']

batch\_normalization\_211 (Batch (None, 25, 25, 64) 192 ['conv2d\_211[0][0]']

Normalization)

activation\_211 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_211[0][0]']

conv2d\_209 (Conv2D) (None, 25, 25, 48) 9216 ['max\_pooling2d\_5[0][0]']

conv2d\_212 (Conv2D) (None, 25, 25, 96) 55296 ['activation\_211[0][0]']

batch\_normalization\_209 (Batch (None, 25, 25, 48) 144 ['conv2d\_209[0][0]']

Normalization)

batch\_normalization\_212 (Batch (None, 25, 25, 96) 288 ['conv2d\_212[0][0]']

Normalization)

activation\_209 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_209[0][0]']

activation\_212 (Activation) (None, 25, 25, 96) 0 ['batch\_normalization\_212[0][0]']

average\_pooling2d\_1 (AveragePo (None, 25, 25, 192) 0 ['max\_pooling2d\_5[0][0]']

oling2D)

conv2d\_208 (Conv2D) (None, 25, 25, 96) 18432 ['max\_pooling2d\_5[0][0]']

conv2d\_210 (Conv2D) (None, 25, 25, 64) 76800 ['activation\_209[0][0]']

conv2d\_213 (Conv2D) (None, 25, 25, 96) 82944 ['activation\_212[0][0]']

conv2d\_214 (Conv2D) (None, 25, 25, 64) 12288 ['average\_pooling2d\_1[0][0]']

batch\_normalization\_208 (Batch (None, 25, 25, 96) 288 ['conv2d\_208[0][0]']

Normalization)

batch\_normalization\_210 (Batch (None, 25, 25, 64) 192 ['conv2d\_210[0][0]']

Normalization)

batch\_normalization\_213 (Batch (None, 25, 25, 96) 288 ['conv2d\_213[0][0]']

Normalization)

batch\_normalization\_214 (Batch (None, 25, 25, 64) 192 ['conv2d\_214[0][0]']

Normalization)

activation\_208 (Activation) (None, 25, 25, 96) 0 ['batch\_normalization\_208[0][0]']

activation\_210 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_210[0][0]']

activation\_213 (Activation) (None, 25, 25, 96) 0 ['batch\_normalization\_213[0][0]']

activation\_214 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_214[0][0]']

mixed\_5b (Concatenate) (None, 25, 25, 320) 0 ['activation\_208[0][0]',

'activation\_210[0][0]',

'activation\_213[0][0]',

'activation\_214[0][0]']

conv2d\_218 (Conv2D) (None, 25, 25, 32) 10240 ['mixed\_5b[0][0]']

batch\_normalization\_218 (Batch (None, 25, 25, 32) 96 ['conv2d\_218[0][0]']

Normalization)

activation\_218 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_218[0][0]']

conv2d\_216 (Conv2D) (None, 25, 25, 32) 10240 ['mixed\_5b[0][0]']

conv2d\_219 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_218[0][0]']

batch\_normalization\_216 (Batch (None, 25, 25, 32) 96 ['conv2d\_216[0][0]']

Normalization)

batch\_normalization\_219 (Batch (None, 25, 25, 48) 144 ['conv2d\_219[0][0]']

Normalization)

activation\_216 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_216[0][0]']

activation\_219 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_219[0][0]']

conv2d\_215 (Conv2D) (None, 25, 25, 32) 10240 ['mixed\_5b[0][0]']

conv2d\_217 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_216[0][0]']

conv2d\_220 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_219[0][0]']

batch\_normalization\_215 (Batch (None, 25, 25, 32) 96 ['conv2d\_215[0][0]']

Normalization)

batch\_normalization\_217 (Batch (None, 25, 25, 32) 96 ['conv2d\_217[0][0]']

Normalization)

batch\_normalization\_220 (Batch (None, 25, 25, 64) 192 ['conv2d\_220[0][0]']

Normalization)

activation\_215 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_215[0][0]']

activation\_217 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_217[0][0]']

activation\_220 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_220[0][0]']

block35\_1\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_215[0][0]',

'activation\_217[0][0]',

'activation\_220[0][0]']

block35\_1\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_1\_mixed[0][0]']

block35\_1 (Lambda) (None, 25, 25, 320) 0 ['mixed\_5b[0][0]',

'block35\_1\_conv[0][0]']

block35\_1\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_1[0][0]']

conv2d\_224 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_1\_ac[0][0]']

batch\_normalization\_224 (Batch (None, 25, 25, 32) 96 ['conv2d\_224[0][0]']

Normalization)

activation\_224 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_224[0][0]']

conv2d\_222 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_1\_ac[0][0]']

conv2d\_225 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_224[0][0]']

batch\_normalization\_222 (Batch (None, 25, 25, 32) 96 ['conv2d\_222[0][0]']

Normalization)

batch\_normalization\_225 (Batch (None, 25, 25, 48) 144 ['conv2d\_225[0][0]']

Normalization)

activation\_222 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_222[0][0]']

activation\_225 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_225[0][0]']

conv2d\_221 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_1\_ac[0][0]']

conv2d\_223 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_222[0][0]']

conv2d\_226 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_225[0][0]']

batch\_normalization\_221 (Batch (None, 25, 25, 32) 96 ['conv2d\_221[0][0]']

Normalization)

batch\_normalization\_223 (Batch (None, 25, 25, 32) 96 ['conv2d\_223[0][0]']

Normalization)

batch\_normalization\_226 (Batch (None, 25, 25, 64) 192 ['conv2d\_226[0][0]']

Normalization)

activation\_221 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_221[0][0]']

activation\_223 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_223[0][0]']

activation\_226 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_226[0][0]']

block35\_2\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_221[0][0]',

'activation\_223[0][0]',

'activation\_226[0][0]']

block35\_2\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_2\_mixed[0][0]']

block35\_2 (Lambda) (None, 25, 25, 320) 0 ['block35\_1\_ac[0][0]',

'block35\_2\_conv[0][0]']

block35\_2\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_2[0][0]']

conv2d\_230 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_2\_ac[0][0]']

batch\_normalization\_230 (Batch (None, 25, 25, 32) 96 ['conv2d\_230[0][0]']

Normalization)

activation\_230 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_230[0][0]']

conv2d\_228 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_2\_ac[0][0]']

conv2d\_231 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_230[0][0]']

batch\_normalization\_228 (Batch (None, 25, 25, 32) 96 ['conv2d\_228[0][0]']

Normalization)

batch\_normalization\_231 (Batch (None, 25, 25, 48) 144 ['conv2d\_231[0][0]']

Normalization)

activation\_228 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_228[0][0]']

activation\_231 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_231[0][0]']

conv2d\_227 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_2\_ac[0][0]']

conv2d\_229 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_228[0][0]']

conv2d\_232 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_231[0][0]']

batch\_normalization\_227 (Batch (None, 25, 25, 32) 96 ['conv2d\_227[0][0]']

Normalization)

batch\_normalization\_229 (Batch (None, 25, 25, 32) 96 ['conv2d\_229[0][0]']

Normalization)

batch\_normalization\_232 (Batch (None, 25, 25, 64) 192 ['conv2d\_232[0][0]']

Normalization)

activation\_227 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_227[0][0]']

activation\_229 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_229[0][0]']

activation\_232 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_232[0][0]']

block35\_3\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_227[0][0]',

'activation\_229[0][0]',

'activation\_232[0][0]']

block35\_3\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_3\_mixed[0][0]']

block35\_3 (Lambda) (None, 25, 25, 320) 0 ['block35\_2\_ac[0][0]',

'block35\_3\_conv[0][0]']

block35\_3\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_3[0][0]']

conv2d\_236 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_3\_ac[0][0]']

batch\_normalization\_236 (Batch (None, 25, 25, 32) 96 ['conv2d\_236[0][0]']

Normalization)

activation\_236 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_236[0][0]']

conv2d\_234 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_3\_ac[0][0]']

conv2d\_237 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_236[0][0]']

batch\_normalization\_234 (Batch (None, 25, 25, 32) 96 ['conv2d\_234[0][0]']

Normalization)

batch\_normalization\_237 (Batch (None, 25, 25, 48) 144 ['conv2d\_237[0][0]']

Normalization)

activation\_234 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_234[0][0]']

activation\_237 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_237[0][0]']

conv2d\_233 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_3\_ac[0][0]']

conv2d\_235 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_234[0][0]']

conv2d\_238 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_237[0][0]']

batch\_normalization\_233 (Batch (None, 25, 25, 32) 96 ['conv2d\_233[0][0]']

Normalization)

batch\_normalization\_235 (Batch (None, 25, 25, 32) 96 ['conv2d\_235[0][0]']

Normalization)

batch\_normalization\_238 (Batch (None, 25, 25, 64) 192 ['conv2d\_238[0][0]']

Normalization)

activation\_233 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_233[0][0]']

activation\_235 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_235[0][0]']

activation\_238 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_238[0][0]']

block35\_4\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_233[0][0]',

'activation\_235[0][0]',

'activation\_238[0][0]']

block35\_4\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_4\_mixed[0][0]']

block35\_4 (Lambda) (None, 25, 25, 320) 0 ['block35\_3\_ac[0][0]',

'block35\_4\_conv[0][0]']

block35\_4\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_4[0][0]']

conv2d\_242 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_4\_ac[0][0]']

batch\_normalization\_242 (Batch (None, 25, 25, 32) 96 ['conv2d\_242[0][0]']

Normalization)

activation\_242 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_242[0][0]']

conv2d\_240 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_4\_ac[0][0]']

conv2d\_243 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_242[0][0]']

batch\_normalization\_240 (Batch (None, 25, 25, 32) 96 ['conv2d\_240[0][0]']

Normalization)

batch\_normalization\_243 (Batch (None, 25, 25, 48) 144 ['conv2d\_243[0][0]']

Normalization)

activation\_240 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_240[0][0]']

activation\_243 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_243[0][0]']

conv2d\_239 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_4\_ac[0][0]']

conv2d\_241 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_240[0][0]']

conv2d\_244 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_243[0][0]']

batch\_normalization\_239 (Batch (None, 25, 25, 32) 96 ['conv2d\_239[0][0]']

Normalization)

batch\_normalization\_241 (Batch (None, 25, 25, 32) 96 ['conv2d\_241[0][0]']

Normalization)

batch\_normalization\_244 (Batch (None, 25, 25, 64) 192 ['conv2d\_244[0][0]']

Normalization)

activation\_239 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_239[0][0]']

activation\_241 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_241[0][0]']

activation\_244 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_244[0][0]']

block35\_5\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_239[0][0]',

'activation\_241[0][0]',

'activation\_244[0][0]']

block35\_5\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_5\_mixed[0][0]']

block35\_5 (Lambda) (None, 25, 25, 320) 0 ['block35\_4\_ac[0][0]',

'block35\_5\_conv[0][0]']

block35\_5\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_5[0][0]']

conv2d\_248 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_5\_ac[0][0]']

batch\_normalization\_248 (Batch (None, 25, 25, 32) 96 ['conv2d\_248[0][0]']

Normalization)

activation\_248 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_248[0][0]']

conv2d\_246 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_5\_ac[0][0]']

conv2d\_249 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_248[0][0]']

batch\_normalization\_246 (Batch (None, 25, 25, 32) 96 ['conv2d\_246[0][0]']

Normalization)

batch\_normalization\_249 (Batch (None, 25, 25, 48) 144 ['conv2d\_249[0][0]']

Normalization)

activation\_246 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_246[0][0]']

activation\_249 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_249[0][0]']

conv2d\_245 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_5\_ac[0][0]']

conv2d\_247 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_246[0][0]']

conv2d\_250 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_249[0][0]']

batch\_normalization\_245 (Batch (None, 25, 25, 32) 96 ['conv2d\_245[0][0]']

Normalization)

batch\_normalization\_247 (Batch (None, 25, 25, 32) 96 ['conv2d\_247[0][0]']

Normalization)

batch\_normalization\_250 (Batch (None, 25, 25, 64) 192 ['conv2d\_250[0][0]']

Normalization)

activation\_245 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_245[0][0]']

activation\_247 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_247[0][0]']

activation\_250 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_250[0][0]']

block35\_6\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_245[0][0]',

'activation\_247[0][0]',

'activation\_250[0][0]']

block35\_6\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_6\_mixed[0][0]']

block35\_6 (Lambda) (None, 25, 25, 320) 0 ['block35\_5\_ac[0][0]',

'block35\_6\_conv[0][0]']

block35\_6\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_6[0][0]']

conv2d\_254 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_6\_ac[0][0]']

batch\_normalization\_254 (Batch (None, 25, 25, 32) 96 ['conv2d\_254[0][0]']

Normalization)

activation\_254 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_254[0][0]']

conv2d\_252 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_6\_ac[0][0]']

conv2d\_255 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_254[0][0]']

batch\_normalization\_252 (Batch (None, 25, 25, 32) 96 ['conv2d\_252[0][0]']

Normalization)

batch\_normalization\_255 (Batch (None, 25, 25, 48) 144 ['conv2d\_255[0][0]']

Normalization)

activation\_252 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_252[0][0]']

activation\_255 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_255[0][0]']

conv2d\_251 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_6\_ac[0][0]']

conv2d\_253 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_252[0][0]']

conv2d\_256 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_255[0][0]']

batch\_normalization\_251 (Batch (None, 25, 25, 32) 96 ['conv2d\_251[0][0]']

Normalization)

batch\_normalization\_253 (Batch (None, 25, 25, 32) 96 ['conv2d\_253[0][0]']

Normalization)

batch\_normalization\_256 (Batch (None, 25, 25, 64) 192 ['conv2d\_256[0][0]']

Normalization)

activation\_251 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_251[0][0]']

activation\_253 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_253[0][0]']

activation\_256 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_256[0][0]']

block35\_7\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_251[0][0]',

'activation\_253[0][0]',

'activation\_256[0][0]']

block35\_7\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_7\_mixed[0][0]']

block35\_7 (Lambda) (None, 25, 25, 320) 0 ['block35\_6\_ac[0][0]',

'block35\_7\_conv[0][0]']

block35\_7\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_7[0][0]']

conv2d\_260 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_7\_ac[0][0]']

batch\_normalization\_260 (Batch (None, 25, 25, 32) 96 ['conv2d\_260[0][0]']

Normalization)

activation\_260 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_260[0][0]']

conv2d\_258 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_7\_ac[0][0]']

conv2d\_261 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_260[0][0]']

batch\_normalization\_258 (Batch (None, 25, 25, 32) 96 ['conv2d\_258[0][0]']

Normalization)

batch\_normalization\_261 (Batch (None, 25, 25, 48) 144 ['conv2d\_261[0][0]']

Normalization)

activation\_258 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_258[0][0]']

activation\_261 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_261[0][0]']

conv2d\_257 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_7\_ac[0][0]']

conv2d\_259 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_258[0][0]']

conv2d\_262 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_261[0][0]']

batch\_normalization\_257 (Batch (None, 25, 25, 32) 96 ['conv2d\_257[0][0]']

Normalization)

batch\_normalization\_259 (Batch (None, 25, 25, 32) 96 ['conv2d\_259[0][0]']

Normalization)

batch\_normalization\_262 (Batch (None, 25, 25, 64) 192 ['conv2d\_262[0][0]']

Normalization)

activation\_257 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_257[0][0]']

activation\_259 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_259[0][0]']

activation\_262 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_262[0][0]']

block35\_8\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_257[0][0]',

'activation\_259[0][0]',

'activation\_262[0][0]']

block35\_8\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_8\_mixed[0][0]']

block35\_8 (Lambda) (None, 25, 25, 320) 0 ['block35\_7\_ac[0][0]',

'block35\_8\_conv[0][0]']

block35\_8\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_8[0][0]']

conv2d\_266 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_8\_ac[0][0]']

batch\_normalization\_266 (Batch (None, 25, 25, 32) 96 ['conv2d\_266[0][0]']

Normalization)

activation\_266 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_266[0][0]']

conv2d\_264 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_8\_ac[0][0]']

conv2d\_267 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_266[0][0]']

batch\_normalization\_264 (Batch (None, 25, 25, 32) 96 ['conv2d\_264[0][0]']

Normalization)

batch\_normalization\_267 (Batch (None, 25, 25, 48) 144 ['conv2d\_267[0][0]']

Normalization)

activation\_264 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_264[0][0]']

activation\_267 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_267[0][0]']

conv2d\_263 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_8\_ac[0][0]']

conv2d\_265 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_264[0][0]']

conv2d\_268 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_267[0][0]']

batch\_normalization\_263 (Batch (None, 25, 25, 32) 96 ['conv2d\_263[0][0]']

Normalization)

batch\_normalization\_265 (Batch (None, 25, 25, 32) 96 ['conv2d\_265[0][0]']

Normalization)

batch\_normalization\_268 (Batch (None, 25, 25, 64) 192 ['conv2d\_268[0][0]']

Normalization)

activation\_263 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_263[0][0]']

activation\_265 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_265[0][0]']

activation\_268 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_268[0][0]']

block35\_9\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_263[0][0]',

'activation\_265[0][0]',

'activation\_268[0][0]']

block35\_9\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_9\_mixed[0][0]']

block35\_9 (Lambda) (None, 25, 25, 320) 0 ['block35\_8\_ac[0][0]',

'block35\_9\_conv[0][0]']

block35\_9\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_9[0][0]']

conv2d\_272 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_9\_ac[0][0]']

batch\_normalization\_272 (Batch (None, 25, 25, 32) 96 ['conv2d\_272[0][0]']

Normalization)

activation\_272 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_272[0][0]']

conv2d\_270 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_9\_ac[0][0]']

conv2d\_273 (Conv2D) (None, 25, 25, 48) 13824 ['activation\_272[0][0]']

batch\_normalization\_270 (Batch (None, 25, 25, 32) 96 ['conv2d\_270[0][0]']

Normalization)

batch\_normalization\_273 (Batch (None, 25, 25, 48) 144 ['conv2d\_273[0][0]']

Normalization)

activation\_270 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_270[0][0]']

activation\_273 (Activation) (None, 25, 25, 48) 0 ['batch\_normalization\_273[0][0]']

conv2d\_269 (Conv2D) (None, 25, 25, 32) 10240 ['block35\_9\_ac[0][0]']

conv2d\_271 (Conv2D) (None, 25, 25, 32) 9216 ['activation\_270[0][0]']

conv2d\_274 (Conv2D) (None, 25, 25, 64) 27648 ['activation\_273[0][0]']

batch\_normalization\_269 (Batch (None, 25, 25, 32) 96 ['conv2d\_269[0][0]']

Normalization)

batch\_normalization\_271 (Batch (None, 25, 25, 32) 96 ['conv2d\_271[0][0]']

Normalization)

batch\_normalization\_274 (Batch (None, 25, 25, 64) 192 ['conv2d\_274[0][0]']

Normalization)

activation\_269 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_269[0][0]']

activation\_271 (Activation) (None, 25, 25, 32) 0 ['batch\_normalization\_271[0][0]']

activation\_274 (Activation) (None, 25, 25, 64) 0 ['batch\_normalization\_274[0][0]']

block35\_10\_mixed (Concatenate) (None, 25, 25, 128) 0 ['activation\_269[0][0]',

'activation\_271[0][0]',

'activation\_274[0][0]']

block35\_10\_conv (Conv2D) (None, 25, 25, 320) 41280 ['block35\_10\_mixed[0][0]']

block35\_10 (Lambda) (None, 25, 25, 320) 0 ['block35\_9\_ac[0][0]',

'block35\_10\_conv[0][0]']

block35\_10\_ac (Activation) (None, 25, 25, 320) 0 ['block35\_10[0][0]']

conv2d\_276 (Conv2D) (None, 25, 25, 256) 81920 ['block35\_10\_ac[0][0]']

batch\_normalization\_276 (Batch (None, 25, 25, 256) 768 ['conv2d\_276[0][0]']

Normalization)

activation\_276 (Activation) (None, 25, 25, 256) 0 ['batch\_normalization\_276[0][0]']

conv2d\_277 (Conv2D) (None, 25, 25, 256) 589824 ['activation\_276[0][0]']

batch\_normalization\_277 (Batch (None, 25, 25, 256) 768 ['conv2d\_277[0][0]']

Normalization)

activation\_277 (Activation) (None, 25, 25, 256) 0 ['batch\_normalization\_277[0][0]']

conv2d\_275 (Conv2D) (None, 12, 12, 384) 1105920 ['block35\_10\_ac[0][0]']

conv2d\_278 (Conv2D) (None, 12, 12, 384) 884736 ['activation\_277[0][0]']

batch\_normalization\_275 (Batch (None, 12, 12, 384) 1152 ['conv2d\_275[0][0]']

Normalization)

batch\_normalization\_278 (Batch (None, 12, 12, 384) 1152 ['conv2d\_278[0][0]']

Normalization)

activation\_275 (Activation) (None, 12, 12, 384) 0 ['batch\_normalization\_275[0][0]']

activation\_278 (Activation) (None, 12, 12, 384) 0 ['batch\_normalization\_278[0][0]']

max\_pooling2d\_6 (MaxPooling2D) (None, 12, 12, 320) 0 ['block35\_10\_ac[0][0]']

mixed\_6a (Concatenate) (None, 12, 12, 1088 0 ['activation\_275[0][0]',

) 'activation\_278[0][0]',

'max\_pooling2d\_6[0][0]']

conv2d\_280 (Conv2D) (None, 12, 12, 128) 139264 ['mixed\_6a[0][0]']

batch\_normalization\_280 (Batch (None, 12, 12, 128) 384 ['conv2d\_280[0][0]']

Normalization)

activation\_280 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_280[0][0]']

conv2d\_281 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_280[0][0]']

batch\_normalization\_281 (Batch (None, 12, 12, 160) 480 ['conv2d\_281[0][0]']

Normalization)

activation\_281 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_281[0][0]']

conv2d\_279 (Conv2D) (None, 12, 12, 192) 208896 ['mixed\_6a[0][0]']

conv2d\_282 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_281[0][0]']

batch\_normalization\_279 (Batch (None, 12, 12, 192) 576 ['conv2d\_279[0][0]']

Normalization)

batch\_normalization\_282 (Batch (None, 12, 12, 192) 576 ['conv2d\_282[0][0]']

Normalization)

activation\_279 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_279[0][0]']

activation\_282 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_282[0][0]']

block17\_1\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_279[0][0]',

'activation\_282[0][0]']

block17\_1\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_1\_mixed[0][0]']

)

block17\_1 (Lambda) (None, 12, 12, 1088 0 ['mixed\_6a[0][0]',

) 'block17\_1\_conv[0][0]']

block17\_1\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_1[0][0]']

)

conv2d\_284 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_1\_ac[0][0]']

batch\_normalization\_284 (Batch (None, 12, 12, 128) 384 ['conv2d\_284[0][0]']

Normalization)

activation\_284 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_284[0][0]']

conv2d\_285 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_284[0][0]']

batch\_normalization\_285 (Batch (None, 12, 12, 160) 480 ['conv2d\_285[0][0]']

Normalization)

activation\_285 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_285[0][0]']

conv2d\_283 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_1\_ac[0][0]']

conv2d\_286 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_285[0][0]']

batch\_normalization\_283 (Batch (None, 12, 12, 192) 576 ['conv2d\_283[0][0]']

Normalization)

batch\_normalization\_286 (Batch (None, 12, 12, 192) 576 ['conv2d\_286[0][0]']

Normalization)

activation\_283 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_283[0][0]']

activation\_286 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_286[0][0]']

block17\_2\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_283[0][0]',

'activation\_286[0][0]']

block17\_2\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_2\_mixed[0][0]']

)

block17\_2 (Lambda) (None, 12, 12, 1088 0 ['block17\_1\_ac[0][0]',

) 'block17\_2\_conv[0][0]']

block17\_2\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_2[0][0]']

)

conv2d\_288 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_2\_ac[0][0]']

batch\_normalization\_288 (Batch (None, 12, 12, 128) 384 ['conv2d\_288[0][0]']

Normalization)

activation\_288 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_288[0][0]']

conv2d\_289 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_288[0][0]']

batch\_normalization\_289 (Batch (None, 12, 12, 160) 480 ['conv2d\_289[0][0]']

Normalization)

activation\_289 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_289[0][0]']

conv2d\_287 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_2\_ac[0][0]']

conv2d\_290 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_289[0][0]']

batch\_normalization\_287 (Batch (None, 12, 12, 192) 576 ['conv2d\_287[0][0]']

Normalization)

batch\_normalization\_290 (Batch (None, 12, 12, 192) 576 ['conv2d\_290[0][0]']

Normalization)

activation\_287 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_287[0][0]']

activation\_290 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_290[0][0]']

block17\_3\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_287[0][0]',

'activation\_290[0][0]']

block17\_3\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_3\_mixed[0][0]']

)

block17\_3 (Lambda) (None, 12, 12, 1088 0 ['block17\_2\_ac[0][0]',

) 'block17\_3\_conv[0][0]']

block17\_3\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_3[0][0]']

)

conv2d\_292 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_3\_ac[0][0]']

batch\_normalization\_292 (Batch (None, 12, 12, 128) 384 ['conv2d\_292[0][0]']

Normalization)

activation\_292 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_292[0][0]']

conv2d\_293 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_292[0][0]']

batch\_normalization\_293 (Batch (None, 12, 12, 160) 480 ['conv2d\_293[0][0]']

Normalization)

activation\_293 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_293[0][0]']

conv2d\_291 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_3\_ac[0][0]']

conv2d\_294 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_293[0][0]']

batch\_normalization\_291 (Batch (None, 12, 12, 192) 576 ['conv2d\_291[0][0]']

Normalization)

batch\_normalization\_294 (Batch (None, 12, 12, 192) 576 ['conv2d\_294[0][0]']

Normalization)

activation\_291 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_291[0][0]']

activation\_294 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_294[0][0]']

block17\_4\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_291[0][0]',

'activation\_294[0][0]']

block17\_4\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_4\_mixed[0][0]']

)

block17\_4 (Lambda) (None, 12, 12, 1088 0 ['block17\_3\_ac[0][0]',

) 'block17\_4\_conv[0][0]']

block17\_4\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_4[0][0]']

)

conv2d\_296 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_4\_ac[0][0]']

batch\_normalization\_296 (Batch (None, 12, 12, 128) 384 ['conv2d\_296[0][0]']

Normalization)

activation\_296 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_296[0][0]']

conv2d\_297 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_296[0][0]']

batch\_normalization\_297 (Batch (None, 12, 12, 160) 480 ['conv2d\_297[0][0]']

Normalization)

activation\_297 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_297[0][0]']

conv2d\_295 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_4\_ac[0][0]']

conv2d\_298 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_297[0][0]']

batch\_normalization\_295 (Batch (None, 12, 12, 192) 576 ['conv2d\_295[0][0]']

Normalization)

batch\_normalization\_298 (Batch (None, 12, 12, 192) 576 ['conv2d\_298[0][0]']

Normalization)

activation\_295 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_295[0][0]']

activation\_298 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_298[0][0]']

block17\_5\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_295[0][0]',

'activation\_298[0][0]']

block17\_5\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_5\_mixed[0][0]']

)

block17\_5 (Lambda) (None, 12, 12, 1088 0 ['block17\_4\_ac[0][0]',

) 'block17\_5\_conv[0][0]']

block17\_5\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_5[0][0]']

)

conv2d\_300 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_5\_ac[0][0]']

batch\_normalization\_300 (Batch (None, 12, 12, 128) 384 ['conv2d\_300[0][0]']

Normalization)

activation\_300 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_300[0][0]']

conv2d\_301 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_300[0][0]']

batch\_normalization\_301 (Batch (None, 12, 12, 160) 480 ['conv2d\_301[0][0]']

Normalization)

activation\_301 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_301[0][0]']

conv2d\_299 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_5\_ac[0][0]']

conv2d\_302 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_301[0][0]']

batch\_normalization\_299 (Batch (None, 12, 12, 192) 576 ['conv2d\_299[0][0]']

Normalization)

batch\_normalization\_302 (Batch (None, 12, 12, 192) 576 ['conv2d\_302[0][0]']

Normalization)

activation\_299 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_299[0][0]']

activation\_302 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_302[0][0]']

block17\_6\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_299[0][0]',

'activation\_302[0][0]']

block17\_6\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_6\_mixed[0][0]']

)

block17\_6 (Lambda) (None, 12, 12, 1088 0 ['block17\_5\_ac[0][0]',

) 'block17\_6\_conv[0][0]']

block17\_6\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_6[0][0]']

)

conv2d\_304 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_6\_ac[0][0]']

batch\_normalization\_304 (Batch (None, 12, 12, 128) 384 ['conv2d\_304[0][0]']

Normalization)

activation\_304 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_304[0][0]']

conv2d\_305 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_304[0][0]']

batch\_normalization\_305 (Batch (None, 12, 12, 160) 480 ['conv2d\_305[0][0]']

Normalization)

activation\_305 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_305[0][0]']

conv2d\_303 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_6\_ac[0][0]']

conv2d\_306 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_305[0][0]']

batch\_normalization\_303 (Batch (None, 12, 12, 192) 576 ['conv2d\_303[0][0]']

Normalization)

batch\_normalization\_306 (Batch (None, 12, 12, 192) 576 ['conv2d\_306[0][0]']

Normalization)

activation\_303 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_303[0][0]']

activation\_306 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_306[0][0]']

block17\_7\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_303[0][0]',

'activation\_306[0][0]']

block17\_7\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_7\_mixed[0][0]']

)

block17\_7 (Lambda) (None, 12, 12, 1088 0 ['block17\_6\_ac[0][0]',

) 'block17\_7\_conv[0][0]']

block17\_7\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_7[0][0]']

)

conv2d\_308 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_7\_ac[0][0]']

batch\_normalization\_308 (Batch (None, 12, 12, 128) 384 ['conv2d\_308[0][0]']

Normalization)

activation\_308 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_308[0][0]']

conv2d\_309 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_308[0][0]']

batch\_normalization\_309 (Batch (None, 12, 12, 160) 480 ['conv2d\_309[0][0]']

Normalization)

activation\_309 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_309[0][0]']

conv2d\_307 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_7\_ac[0][0]']

conv2d\_310 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_309[0][0]']

batch\_normalization\_307 (Batch (None, 12, 12, 192) 576 ['conv2d\_307[0][0]']

Normalization)

batch\_normalization\_310 (Batch (None, 12, 12, 192) 576 ['conv2d\_310[0][0]']

Normalization)

activation\_307 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_307[0][0]']

activation\_310 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_310[0][0]']

block17\_8\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_307[0][0]',

'activation\_310[0][0]']

block17\_8\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_8\_mixed[0][0]']

)

block17\_8 (Lambda) (None, 12, 12, 1088 0 ['block17\_7\_ac[0][0]',

) 'block17\_8\_conv[0][0]']

block17\_8\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_8[0][0]']

)

conv2d\_312 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_8\_ac[0][0]']

batch\_normalization\_312 (Batch (None, 12, 12, 128) 384 ['conv2d\_312[0][0]']

Normalization)

activation\_312 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_312[0][0]']

conv2d\_313 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_312[0][0]']

batch\_normalization\_313 (Batch (None, 12, 12, 160) 480 ['conv2d\_313[0][0]']

Normalization)

activation\_313 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_313[0][0]']

conv2d\_311 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_8\_ac[0][0]']

conv2d\_314 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_313[0][0]']

batch\_normalization\_311 (Batch (None, 12, 12, 192) 576 ['conv2d\_311[0][0]']

Normalization)

batch\_normalization\_314 (Batch (None, 12, 12, 192) 576 ['conv2d\_314[0][0]']

Normalization)

activation\_311 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_311[0][0]']

activation\_314 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_314[0][0]']

block17\_9\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_311[0][0]',

'activation\_314[0][0]']

block17\_9\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_9\_mixed[0][0]']

)

block17\_9 (Lambda) (None, 12, 12, 1088 0 ['block17\_8\_ac[0][0]',

) 'block17\_9\_conv[0][0]']

block17\_9\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_9[0][0]']

)

conv2d\_316 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_9\_ac[0][0]']

batch\_normalization\_316 (Batch (None, 12, 12, 128) 384 ['conv2d\_316[0][0]']

Normalization)

activation\_316 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_316[0][0]']

conv2d\_317 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_316[0][0]']

batch\_normalization\_317 (Batch (None, 12, 12, 160) 480 ['conv2d\_317[0][0]']

Normalization)

activation\_317 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_317[0][0]']

conv2d\_315 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_9\_ac[0][0]']

conv2d\_318 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_317[0][0]']

batch\_normalization\_315 (Batch (None, 12, 12, 192) 576 ['conv2d\_315[0][0]']

Normalization)

batch\_normalization\_318 (Batch (None, 12, 12, 192) 576 ['conv2d\_318[0][0]']

Normalization)

activation\_315 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_315[0][0]']

activation\_318 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_318[0][0]']

block17\_10\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_315[0][0]',

'activation\_318[0][0]']

block17\_10\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_10\_mixed[0][0]']

)

block17\_10 (Lambda) (None, 12, 12, 1088 0 ['block17\_9\_ac[0][0]',

) 'block17\_10\_conv[0][0]']

block17\_10\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_10[0][0]']

)

conv2d\_320 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_10\_ac[0][0]']

batch\_normalization\_320 (Batch (None, 12, 12, 128) 384 ['conv2d\_320[0][0]']

Normalization)

activation\_320 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_320[0][0]']

conv2d\_321 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_320[0][0]']

batch\_normalization\_321 (Batch (None, 12, 12, 160) 480 ['conv2d\_321[0][0]']

Normalization)

activation\_321 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_321[0][0]']

conv2d\_319 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_10\_ac[0][0]']

conv2d\_322 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_321[0][0]']

batch\_normalization\_319 (Batch (None, 12, 12, 192) 576 ['conv2d\_319[0][0]']

Normalization)

batch\_normalization\_322 (Batch (None, 12, 12, 192) 576 ['conv2d\_322[0][0]']

Normalization)

activation\_319 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_319[0][0]']

activation\_322 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_322[0][0]']

block17\_11\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_319[0][0]',

'activation\_322[0][0]']

block17\_11\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_11\_mixed[0][0]']

)

block17\_11 (Lambda) (None, 12, 12, 1088 0 ['block17\_10\_ac[0][0]',

) 'block17\_11\_conv[0][0]']

block17\_11\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_11[0][0]']

)

conv2d\_324 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_11\_ac[0][0]']

batch\_normalization\_324 (Batch (None, 12, 12, 128) 384 ['conv2d\_324[0][0]']

Normalization)

activation\_324 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_324[0][0]']

conv2d\_325 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_324[0][0]']

batch\_normalization\_325 (Batch (None, 12, 12, 160) 480 ['conv2d\_325[0][0]']

Normalization)

activation\_325 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_325[0][0]']

conv2d\_323 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_11\_ac[0][0]']

conv2d\_326 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_325[0][0]']

batch\_normalization\_323 (Batch (None, 12, 12, 192) 576 ['conv2d\_323[0][0]']

Normalization)

batch\_normalization\_326 (Batch (None, 12, 12, 192) 576 ['conv2d\_326[0][0]']

Normalization)

activation\_323 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_323[0][0]']

activation\_326 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_326[0][0]']

block17\_12\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_323[0][0]',

'activation\_326[0][0]']

block17\_12\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_12\_mixed[0][0]']

)

block17\_12 (Lambda) (None, 12, 12, 1088 0 ['block17\_11\_ac[0][0]',

) 'block17\_12\_conv[0][0]']

block17\_12\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_12[0][0]']

)

conv2d\_328 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_12\_ac[0][0]']

batch\_normalization\_328 (Batch (None, 12, 12, 128) 384 ['conv2d\_328[0][0]']

Normalization)

activation\_328 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_328[0][0]']

conv2d\_329 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_328[0][0]']

batch\_normalization\_329 (Batch (None, 12, 12, 160) 480 ['conv2d\_329[0][0]']

Normalization)

activation\_329 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_329[0][0]']

conv2d\_327 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_12\_ac[0][0]']

conv2d\_330 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_329[0][0]']

batch\_normalization\_327 (Batch (None, 12, 12, 192) 576 ['conv2d\_327[0][0]']

Normalization)

batch\_normalization\_330 (Batch (None, 12, 12, 192) 576 ['conv2d\_330[0][0]']

Normalization)

activation\_327 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_327[0][0]']

activation\_330 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_330[0][0]']

block17\_13\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_327[0][0]',

'activation\_330[0][0]']

block17\_13\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_13\_mixed[0][0]']

)

block17\_13 (Lambda) (None, 12, 12, 1088 0 ['block17\_12\_ac[0][0]',

) 'block17\_13\_conv[0][0]']

block17\_13\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_13[0][0]']

)

conv2d\_332 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_13\_ac[0][0]']

batch\_normalization\_332 (Batch (None, 12, 12, 128) 384 ['conv2d\_332[0][0]']

Normalization)

activation\_332 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_332[0][0]']

conv2d\_333 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_332[0][0]']

batch\_normalization\_333 (Batch (None, 12, 12, 160) 480 ['conv2d\_333[0][0]']

Normalization)

activation\_333 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_333[0][0]']

conv2d\_331 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_13\_ac[0][0]']

conv2d\_334 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_333[0][0]']

batch\_normalization\_331 (Batch (None, 12, 12, 192) 576 ['conv2d\_331[0][0]']

Normalization)

batch\_normalization\_334 (Batch (None, 12, 12, 192) 576 ['conv2d\_334[0][0]']

Normalization)

activation\_331 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_331[0][0]']

activation\_334 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_334[0][0]']

block17\_14\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_331[0][0]',

'activation\_334[0][0]']

block17\_14\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_14\_mixed[0][0]']

)

block17\_14 (Lambda) (None, 12, 12, 1088 0 ['block17\_13\_ac[0][0]',

) 'block17\_14\_conv[0][0]']

block17\_14\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_14[0][0]']

)

conv2d\_336 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_14\_ac[0][0]']

batch\_normalization\_336 (Batch (None, 12, 12, 128) 384 ['conv2d\_336[0][0]']

Normalization)

activation\_336 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_336[0][0]']

conv2d\_337 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_336[0][0]']

batch\_normalization\_337 (Batch (None, 12, 12, 160) 480 ['conv2d\_337[0][0]']

Normalization)

activation\_337 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_337[0][0]']

conv2d\_335 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_14\_ac[0][0]']

conv2d\_338 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_337[0][0]']

batch\_normalization\_335 (Batch (None, 12, 12, 192) 576 ['conv2d\_335[0][0]']

Normalization)

batch\_normalization\_338 (Batch (None, 12, 12, 192) 576 ['conv2d\_338[0][0]']

Normalization)

activation\_335 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_335[0][0]']

activation\_338 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_338[0][0]']

block17\_15\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_335[0][0]',

'activation\_338[0][0]']

block17\_15\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_15\_mixed[0][0]']

)

block17\_15 (Lambda) (None, 12, 12, 1088 0 ['block17\_14\_ac[0][0]',

) 'block17\_15\_conv[0][0]']

block17\_15\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_15[0][0]']

)

conv2d\_340 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_15\_ac[0][0]']

batch\_normalization\_340 (Batch (None, 12, 12, 128) 384 ['conv2d\_340[0][0]']

Normalization)

activation\_340 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_340[0][0]']

conv2d\_341 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_340[0][0]']

batch\_normalization\_341 (Batch (None, 12, 12, 160) 480 ['conv2d\_341[0][0]']

Normalization)

activation\_341 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_341[0][0]']

conv2d\_339 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_15\_ac[0][0]']

conv2d\_342 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_341[0][0]']

batch\_normalization\_339 (Batch (None, 12, 12, 192) 576 ['conv2d\_339[0][0]']

Normalization)

batch\_normalization\_342 (Batch (None, 12, 12, 192) 576 ['conv2d\_342[0][0]']

Normalization)

activation\_339 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_339[0][0]']

activation\_342 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_342[0][0]']

block17\_16\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_339[0][0]',

'activation\_342[0][0]']

block17\_16\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_16\_mixed[0][0]']

)

block17\_16 (Lambda) (None, 12, 12, 1088 0 ['block17\_15\_ac[0][0]',

) 'block17\_16\_conv[0][0]']

block17\_16\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_16[0][0]']

)

conv2d\_344 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_16\_ac[0][0]']

batch\_normalization\_344 (Batch (None, 12, 12, 128) 384 ['conv2d\_344[0][0]']

Normalization)

activation\_344 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_344[0][0]']

conv2d\_345 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_344[0][0]']

batch\_normalization\_345 (Batch (None, 12, 12, 160) 480 ['conv2d\_345[0][0]']

Normalization)

activation\_345 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_345[0][0]']

conv2d\_343 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_16\_ac[0][0]']

conv2d\_346 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_345[0][0]']

batch\_normalization\_343 (Batch (None, 12, 12, 192) 576 ['conv2d\_343[0][0]']

Normalization)

batch\_normalization\_346 (Batch (None, 12, 12, 192) 576 ['conv2d\_346[0][0]']

Normalization)

activation\_343 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_343[0][0]']

activation\_346 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_346[0][0]']

block17\_17\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_343[0][0]',

'activation\_346[0][0]']

block17\_17\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_17\_mixed[0][0]']

)

block17\_17 (Lambda) (None, 12, 12, 1088 0 ['block17\_16\_ac[0][0]',

) 'block17\_17\_conv[0][0]']

block17\_17\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_17[0][0]']

)

conv2d\_348 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_17\_ac[0][0]']

batch\_normalization\_348 (Batch (None, 12, 12, 128) 384 ['conv2d\_348[0][0]']

Normalization)

activation\_348 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_348[0][0]']

conv2d\_349 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_348[0][0]']

batch\_normalization\_349 (Batch (None, 12, 12, 160) 480 ['conv2d\_349[0][0]']

Normalization)

activation\_349 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_349[0][0]']

conv2d\_347 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_17\_ac[0][0]']

conv2d\_350 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_349[0][0]']

batch\_normalization\_347 (Batch (None, 12, 12, 192) 576 ['conv2d\_347[0][0]']

Normalization)

batch\_normalization\_350 (Batch (None, 12, 12, 192) 576 ['conv2d\_350[0][0]']

Normalization)

activation\_347 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_347[0][0]']

activation\_350 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_350[0][0]']

block17\_18\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_347[0][0]',

'activation\_350[0][0]']

block17\_18\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_18\_mixed[0][0]']

)

block17\_18 (Lambda) (None, 12, 12, 1088 0 ['block17\_17\_ac[0][0]',

) 'block17\_18\_conv[0][0]']

block17\_18\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_18[0][0]']

)

conv2d\_352 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_18\_ac[0][0]']

batch\_normalization\_352 (Batch (None, 12, 12, 128) 384 ['conv2d\_352[0][0]']

Normalization)

activation\_352 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_352[0][0]']

conv2d\_353 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_352[0][0]']

batch\_normalization\_353 (Batch (None, 12, 12, 160) 480 ['conv2d\_353[0][0]']

Normalization)

activation\_353 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_353[0][0]']

conv2d\_351 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_18\_ac[0][0]']

conv2d\_354 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_353[0][0]']

batch\_normalization\_351 (Batch (None, 12, 12, 192) 576 ['conv2d\_351[0][0]']

Normalization)

batch\_normalization\_354 (Batch (None, 12, 12, 192) 576 ['conv2d\_354[0][0]']

Normalization)

activation\_351 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_351[0][0]']

activation\_354 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_354[0][0]']

block17\_19\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_351[0][0]',

'activation\_354[0][0]']

block17\_19\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_19\_mixed[0][0]']

)

block17\_19 (Lambda) (None, 12, 12, 1088 0 ['block17\_18\_ac[0][0]',

) 'block17\_19\_conv[0][0]']

block17\_19\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_19[0][0]']

)

conv2d\_356 (Conv2D) (None, 12, 12, 128) 139264 ['block17\_19\_ac[0][0]']

batch\_normalization\_356 (Batch (None, 12, 12, 128) 384 ['conv2d\_356[0][0]']

Normalization)

activation\_356 (Activation) (None, 12, 12, 128) 0 ['batch\_normalization\_356[0][0]']

conv2d\_357 (Conv2D) (None, 12, 12, 160) 143360 ['activation\_356[0][0]']

batch\_normalization\_357 (Batch (None, 12, 12, 160) 480 ['conv2d\_357[0][0]']

Normalization)

activation\_357 (Activation) (None, 12, 12, 160) 0 ['batch\_normalization\_357[0][0]']

conv2d\_355 (Conv2D) (None, 12, 12, 192) 208896 ['block17\_19\_ac[0][0]']

conv2d\_358 (Conv2D) (None, 12, 12, 192) 215040 ['activation\_357[0][0]']

batch\_normalization\_355 (Batch (None, 12, 12, 192) 576 ['conv2d\_355[0][0]']

Normalization)

batch\_normalization\_358 (Batch (None, 12, 12, 192) 576 ['conv2d\_358[0][0]']

Normalization)

activation\_355 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_355[0][0]']

activation\_358 (Activation) (None, 12, 12, 192) 0 ['batch\_normalization\_358[0][0]']

block17\_20\_mixed (Concatenate) (None, 12, 12, 384) 0 ['activation\_355[0][0]',

'activation\_358[0][0]']

block17\_20\_conv (Conv2D) (None, 12, 12, 1088 418880 ['block17\_20\_mixed[0][0]']

)

block17\_20 (Lambda) (None, 12, 12, 1088 0 ['block17\_19\_ac[0][0]',

) 'block17\_20\_conv[0][0]']

block17\_20\_ac (Activation) (None, 12, 12, 1088 0 ['block17\_20[0][0]']

)

conv2d\_363 (Conv2D) (None, 12, 12, 256) 278528 ['block17\_20\_ac[0][0]']

batch\_normalization\_363 (Batch (None, 12, 12, 256) 768 ['conv2d\_363[0][0]']

Normalization)

activation\_363 (Activation) (None, 12, 12, 256) 0 ['batch\_normalization\_363[0][0]']

conv2d\_359 (Conv2D) (None, 12, 12, 256) 278528 ['block17\_20\_ac[0][0]']

conv2d\_361 (Conv2D) (None, 12, 12, 256) 278528 ['block17\_20\_ac[0][0]']

conv2d\_364 (Conv2D) (None, 12, 12, 288) 663552 ['activation\_363[0][0]']

batch\_normalization\_359 (Batch (None, 12, 12, 256) 768 ['conv2d\_359[0][0]']

Normalization)

batch\_normalization\_361 (Batch (None, 12, 12, 256) 768 ['conv2d\_361[0][0]']

Normalization)

batch\_normalization\_364 (Batch (None, 12, 12, 288) 864 ['conv2d\_364[0][0]']

Normalization)

activation\_359 (Activation) (None, 12, 12, 256) 0 ['batch\_normalization\_359[0][0]']

activation\_361 (Activation) (None, 12, 12, 256) 0 ['batch\_normalization\_361[0][0]']

activation\_364 (Activation) (None, 12, 12, 288) 0 ['batch\_normalization\_364[0][0]']

conv2d\_360 (Conv2D) (None, 5, 5, 384) 884736 ['activation\_359[0][0]']

conv2d\_362 (Conv2D) (None, 5, 5, 288) 663552 ['activation\_361[0][0]']

conv2d\_365 (Conv2D) (None, 5, 5, 320) 829440 ['activation\_364[0][0]']

batch\_normalization\_360 (Batch (None, 5, 5, 384) 1152 ['conv2d\_360[0][0]']

Normalization)

batch\_normalization\_362 (Batch (None, 5, 5, 288) 864 ['conv2d\_362[0][0]']

Normalization)

batch\_normalization\_365 (Batch (None, 5, 5, 320) 960 ['conv2d\_365[0][0]']

Normalization)

activation\_360 (Activation) (None, 5, 5, 384) 0 ['batch\_normalization\_360[0][0]']

activation\_362 (Activation) (None, 5, 5, 288) 0 ['batch\_normalization\_362[0][0]']

activation\_365 (Activation) (None, 5, 5, 320) 0 ['batch\_normalization\_365[0][0]']

max\_pooling2d\_7 (MaxPooling2D) (None, 5, 5, 1088) 0 ['block17\_20\_ac[0][0]']

mixed\_7a (Concatenate) (None, 5, 5, 2080) 0 ['activation\_360[0][0]',

'activation\_362[0][0]',

'activation\_365[0][0]',

'max\_pooling2d\_7[0][0]']

conv2d\_367 (Conv2D) (None, 5, 5, 192) 399360 ['mixed\_7a[0][0]']

batch\_normalization\_367 (Batch (None, 5, 5, 192) 576 ['conv2d\_367[0][0]']

Normalization)

activation\_367 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_367[0][0]']

conv2d\_368 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_367[0][0]']

batch\_normalization\_368 (Batch (None, 5, 5, 224) 672 ['conv2d\_368[0][0]']

Normalization)

activation\_368 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_368[0][0]']

conv2d\_366 (Conv2D) (None, 5, 5, 192) 399360 ['mixed\_7a[0][0]']

conv2d\_369 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_368[0][0]']

batch\_normalization\_366 (Batch (None, 5, 5, 192) 576 ['conv2d\_366[0][0]']

Normalization)

batch\_normalization\_369 (Batch (None, 5, 5, 256) 768 ['conv2d\_369[0][0]']

Normalization)

activation\_366 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_366[0][0]']

activation\_369 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_369[0][0]']

block8\_1\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_366[0][0]',

'activation\_369[0][0]']

block8\_1\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_1\_mixed[0][0]']

block8\_1 (Lambda) (None, 5, 5, 2080) 0 ['mixed\_7a[0][0]',

'block8\_1\_conv[0][0]']

block8\_1\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_1[0][0]']

conv2d\_371 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_1\_ac[0][0]']

batch\_normalization\_371 (Batch (None, 5, 5, 192) 576 ['conv2d\_371[0][0]']

Normalization)

activation\_371 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_371[0][0]']

conv2d\_372 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_371[0][0]']

batch\_normalization\_372 (Batch (None, 5, 5, 224) 672 ['conv2d\_372[0][0]']

Normalization)

activation\_372 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_372[0][0]']

conv2d\_370 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_1\_ac[0][0]']

conv2d\_373 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_372[0][0]']

batch\_normalization\_370 (Batch (None, 5, 5, 192) 576 ['conv2d\_370[0][0]']

Normalization)

batch\_normalization\_373 (Batch (None, 5, 5, 256) 768 ['conv2d\_373[0][0]']

Normalization)

activation\_370 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_370[0][0]']

activation\_373 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_373[0][0]']

block8\_2\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_370[0][0]',

'activation\_373[0][0]']

block8\_2\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_2\_mixed[0][0]']

block8\_2 (Lambda) (None, 5, 5, 2080) 0 ['block8\_1\_ac[0][0]',

'block8\_2\_conv[0][0]']

block8\_2\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_2[0][0]']

conv2d\_375 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_2\_ac[0][0]']

batch\_normalization\_375 (Batch (None, 5, 5, 192) 576 ['conv2d\_375[0][0]']

Normalization)

activation\_375 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_375[0][0]']

conv2d\_376 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_375[0][0]']

batch\_normalization\_376 (Batch (None, 5, 5, 224) 672 ['conv2d\_376[0][0]']

Normalization)

activation\_376 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_376[0][0]']

conv2d\_374 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_2\_ac[0][0]']

conv2d\_377 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_376[0][0]']

batch\_normalization\_374 (Batch (None, 5, 5, 192) 576 ['conv2d\_374[0][0]']

Normalization)

batch\_normalization\_377 (Batch (None, 5, 5, 256) 768 ['conv2d\_377[0][0]']

Normalization)

activation\_374 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_374[0][0]']

activation\_377 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_377[0][0]']

block8\_3\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_374[0][0]',

'activation\_377[0][0]']

block8\_3\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_3\_mixed[0][0]']

block8\_3 (Lambda) (None, 5, 5, 2080) 0 ['block8\_2\_ac[0][0]',

'block8\_3\_conv[0][0]']

block8\_3\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_3[0][0]']

conv2d\_379 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_3\_ac[0][0]']

batch\_normalization\_379 (Batch (None, 5, 5, 192) 576 ['conv2d\_379[0][0]']

Normalization)

activation\_379 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_379[0][0]']

conv2d\_380 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_379[0][0]']

batch\_normalization\_380 (Batch (None, 5, 5, 224) 672 ['conv2d\_380[0][0]']

Normalization)

activation\_380 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_380[0][0]']

conv2d\_378 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_3\_ac[0][0]']

conv2d\_381 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_380[0][0]']

batch\_normalization\_378 (Batch (None, 5, 5, 192) 576 ['conv2d\_378[0][0]']

Normalization)

batch\_normalization\_381 (Batch (None, 5, 5, 256) 768 ['conv2d\_381[0][0]']

Normalization)

activation\_378 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_378[0][0]']

activation\_381 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_381[0][0]']

block8\_4\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_378[0][0]',

'activation\_381[0][0]']

block8\_4\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_4\_mixed[0][0]']

block8\_4 (Lambda) (None, 5, 5, 2080) 0 ['block8\_3\_ac[0][0]',

'block8\_4\_conv[0][0]']

block8\_4\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_4[0][0]']

conv2d\_383 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_4\_ac[0][0]']

batch\_normalization\_383 (Batch (None, 5, 5, 192) 576 ['conv2d\_383[0][0]']

Normalization)

activation\_383 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_383[0][0]']

conv2d\_384 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_383[0][0]']

batch\_normalization\_384 (Batch (None, 5, 5, 224) 672 ['conv2d\_384[0][0]']

Normalization)

activation\_384 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_384[0][0]']

conv2d\_382 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_4\_ac[0][0]']

conv2d\_385 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_384[0][0]']

batch\_normalization\_382 (Batch (None, 5, 5, 192) 576 ['conv2d\_382[0][0]']

Normalization)

batch\_normalization\_385 (Batch (None, 5, 5, 256) 768 ['conv2d\_385[0][0]']

Normalization)

activation\_382 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_382[0][0]']

activation\_385 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_385[0][0]']

block8\_5\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_382[0][0]',

'activation\_385[0][0]']

block8\_5\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_5\_mixed[0][0]']

block8\_5 (Lambda) (None, 5, 5, 2080) 0 ['block8\_4\_ac[0][0]',

'block8\_5\_conv[0][0]']

block8\_5\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_5[0][0]']

conv2d\_387 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_5\_ac[0][0]']

batch\_normalization\_387 (Batch (None, 5, 5, 192) 576 ['conv2d\_387[0][0]']

Normalization)

activation\_387 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_387[0][0]']

conv2d\_388 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_387[0][0]']

batch\_normalization\_388 (Batch (None, 5, 5, 224) 672 ['conv2d\_388[0][0]']

Normalization)

activation\_388 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_388[0][0]']

conv2d\_386 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_5\_ac[0][0]']

conv2d\_389 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_388[0][0]']

batch\_normalization\_386 (Batch (None, 5, 5, 192) 576 ['conv2d\_386[0][0]']

Normalization)

batch\_normalization\_389 (Batch (None, 5, 5, 256) 768 ['conv2d\_389[0][0]']

Normalization)

activation\_386 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_386[0][0]']

activation\_389 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_389[0][0]']

block8\_6\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_386[0][0]',

'activation\_389[0][0]']

block8\_6\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_6\_mixed[0][0]']

block8\_6 (Lambda) (None, 5, 5, 2080) 0 ['block8\_5\_ac[0][0]',

'block8\_6\_conv[0][0]']

block8\_6\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_6[0][0]']

conv2d\_391 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_6\_ac[0][0]']

batch\_normalization\_391 (Batch (None, 5, 5, 192) 576 ['conv2d\_391[0][0]']

Normalization)

activation\_391 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_391[0][0]']

conv2d\_392 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_391[0][0]']

batch\_normalization\_392 (Batch (None, 5, 5, 224) 672 ['conv2d\_392[0][0]']

Normalization)

activation\_392 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_392[0][0]']

conv2d\_390 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_6\_ac[0][0]']

conv2d\_393 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_392[0][0]']

batch\_normalization\_390 (Batch (None, 5, 5, 192) 576 ['conv2d\_390[0][0]']

Normalization)

batch\_normalization\_393 (Batch (None, 5, 5, 256) 768 ['conv2d\_393[0][0]']

Normalization)

activation\_390 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_390[0][0]']

activation\_393 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_393[0][0]']

block8\_7\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_390[0][0]',

'activation\_393[0][0]']

block8\_7\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_7\_mixed[0][0]']

block8\_7 (Lambda) (None, 5, 5, 2080) 0 ['block8\_6\_ac[0][0]',

'block8\_7\_conv[0][0]']

block8\_7\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_7[0][0]']

conv2d\_395 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_7\_ac[0][0]']

batch\_normalization\_395 (Batch (None, 5, 5, 192) 576 ['conv2d\_395[0][0]']

Normalization)

activation\_395 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_395[0][0]']

conv2d\_396 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_395[0][0]']

batch\_normalization\_396 (Batch (None, 5, 5, 224) 672 ['conv2d\_396[0][0]']

Normalization)

activation\_396 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_396[0][0]']

conv2d\_394 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_7\_ac[0][0]']

conv2d\_397 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_396[0][0]']

batch\_normalization\_394 (Batch (None, 5, 5, 192) 576 ['conv2d\_394[0][0]']

Normalization)

batch\_normalization\_397 (Batch (None, 5, 5, 256) 768 ['conv2d\_397[0][0]']

Normalization)

activation\_394 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_394[0][0]']

activation\_397 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_397[0][0]']

block8\_8\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_394[0][0]',

'activation\_397[0][0]']

block8\_8\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_8\_mixed[0][0]']

block8\_8 (Lambda) (None, 5, 5, 2080) 0 ['block8\_7\_ac[0][0]',

'block8\_8\_conv[0][0]']

block8\_8\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_8[0][0]']

conv2d\_399 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_8\_ac[0][0]']

batch\_normalization\_399 (Batch (None, 5, 5, 192) 576 ['conv2d\_399[0][0]']

Normalization)

activation\_399 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_399[0][0]']

conv2d\_400 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_399[0][0]']

batch\_normalization\_400 (Batch (None, 5, 5, 224) 672 ['conv2d\_400[0][0]']

Normalization)

activation\_400 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_400[0][0]']

conv2d\_398 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_8\_ac[0][0]']

conv2d\_401 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_400[0][0]']

batch\_normalization\_398 (Batch (None, 5, 5, 192) 576 ['conv2d\_398[0][0]']

Normalization)

batch\_normalization\_401 (Batch (None, 5, 5, 256) 768 ['conv2d\_401[0][0]']

Normalization)

activation\_398 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_398[0][0]']

activation\_401 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_401[0][0]']

block8\_9\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_398[0][0]',

'activation\_401[0][0]']

block8\_9\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_9\_mixed[0][0]']

block8\_9 (Lambda) (None, 5, 5, 2080) 0 ['block8\_8\_ac[0][0]',

'block8\_9\_conv[0][0]']

block8\_9\_ac (Activation) (None, 5, 5, 2080) 0 ['block8\_9[0][0]']

conv2d\_403 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_9\_ac[0][0]']

batch\_normalization\_403 (Batch (None, 5, 5, 192) 576 ['conv2d\_403[0][0]']

Normalization)

activation\_403 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_403[0][0]']

conv2d\_404 (Conv2D) (None, 5, 5, 224) 129024 ['activation\_403[0][0]']

batch\_normalization\_404 (Batch (None, 5, 5, 224) 672 ['conv2d\_404[0][0]']

Normalization)

activation\_404 (Activation) (None, 5, 5, 224) 0 ['batch\_normalization\_404[0][0]']

conv2d\_402 (Conv2D) (None, 5, 5, 192) 399360 ['block8\_9\_ac[0][0]']

conv2d\_405 (Conv2D) (None, 5, 5, 256) 172032 ['activation\_404[0][0]']

batch\_normalization\_402 (Batch (None, 5, 5, 192) 576 ['conv2d\_402[0][0]']

Normalization)

batch\_normalization\_405 (Batch (None, 5, 5, 256) 768 ['conv2d\_405[0][0]']

Normalization)

activation\_402 (Activation) (None, 5, 5, 192) 0 ['batch\_normalization\_402[0][0]']

activation\_405 (Activation) (None, 5, 5, 256) 0 ['batch\_normalization\_405[0][0]']

block8\_10\_mixed (Concatenate) (None, 5, 5, 448) 0 ['activation\_402[0][0]',

'activation\_405[0][0]']

block8\_10\_conv (Conv2D) (None, 5, 5, 2080) 933920 ['block8\_10\_mixed[0][0]']

block8\_10 (Lambda) (None, 5, 5, 2080) 0 ['block8\_9\_ac[0][0]',

'block8\_10\_conv[0][0]']

conv\_7b (Conv2D) (None, 5, 5, 1536) 3194880 ['block8\_10[0][0]']

conv\_7b\_bn (BatchNormalization (None, 5, 5, 1536) 4608 ['conv\_7b[0][0]']

)

conv\_7b\_ac (Activation) (None, 5, 5, 1536) 0 ['conv\_7b\_bn[0][0]']

flatten (Flatten) (None, 38400) 0 ['conv\_7b\_ac[0][0]']

dense (Dense) (None, 1) 38401 ['flatten[0][0]']

==================================================================================================

Total params: 54,375,137

Trainable params: 38,401

Non-trainable params: 54,336,736

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Epoch 1/100

55/55 [==============================] - 323s 6s/step - loss: 0.7465 - accuracy: 0.8543 - val\_loss: 0.2372 - val\_accuracy: 0.9378 - lr: 0.0010

Epoch 2/100

55/55 [==============================] - 42s 759ms/step - loss: 0.1061 - accuracy: 0.9724 - val\_loss: 0.1586 - val\_accuracy: 0.9539 - lr: 0.0010

Epoch 3/100

55/55 [==============================] - 41s 751ms/step - loss: 0.0414 - accuracy: 0.9862 - val\_loss: 0.1626 - val\_accuracy: 0.9447 - lr: 0.0010

Epoch 4/100

55/55 [==============================] - 41s 765ms/step - loss: 0.0426 - accuracy: 0.9821 - val\_loss: 0.1272 - val\_accuracy: 0.9608 - lr: 0.0010

Epoch 5/100

55/55 [==============================] - 41s 753ms/step - loss: 0.0381 - accuracy: 0.9873 - val\_loss: 0.1878 - val\_accuracy: 0.9585 - lr: 0.0010

Epoch 6/100

55/55 [==============================] - 41s 751ms/step - loss: 0.0683 - accuracy: 0.9810 - val\_loss: 0.8993 - val\_accuracy: 0.8318 - lr: 0.0010

Epoch 7/100

55/55 [==============================] - 41s 749ms/step - loss: 0.0619 - accuracy: 0.9816 - val\_loss: 0.1429 - val\_accuracy: 0.9700 - lr: 0.0010

Epoch 8/100

55/55 [==============================] - 41s 754ms/step - loss: 0.0018 - accuracy: 1.0000 - val\_loss: 0.1413 - val\_accuracy: 0.9724 - lr: 1.0000e-04

Epoch 9/100

55/55 [==============================] - 42s 760ms/step - loss: 0.0014 - accuracy: 1.0000 - val\_loss: 0.1390 - val\_accuracy: 0.9724 - lr: 1.0000e-04

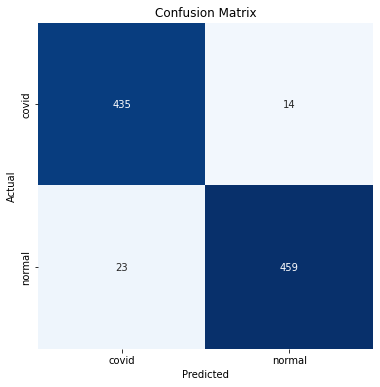
INFO:tensorflow:Assets written to: /content/drive/MyDrive/InceptionResNetV2Split0.7noAug/assets

Test Loss: 0.13227

Test Accuracy: 96.03%

/usr/local/lib/python3.7/dist-packages/ipykernel\_launcher.py:123: DeprecationWarning: `np.int` is a deprecated alias for the builtin `int`. To silence this warning, use `int` by itself. Doing this will not modify any behavior and is safe. When replacing `np.int`, you may wish to use e.g. `np.int64` or `np.int32` to specify the precision. If you wish to review your current use, check the release note link for additional information.

Deprecated in NumPy 1.20; for more details and guidance: <https://numpy.org/devdocs/release/1.20.0-notes.html#deprecations>



Classification Report:

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precision recall f1-score support

covid 0.95 0.97 0.96 449

normal 0.97 0.95 0.96 482

accuracy 0.96 931

macro avg 0.96 0.96 0.96 931

weighted avg 0.96 0.96 0.96 931

