tags: `dlcv`

HW1

P1

1.

Layer (type)	Output Shape	Param #
Conv2d-1	[-1, 32, 149, 149]	864
BatchNorm2d-2	[-1, 32, 149, 149]	64
ReLU-3	[-1, 32, 149, 149]	0
BasicConv2d-4	[-1, 32, 149, 149]	0
Conv2d-5	[-1, 32, 147, 147]	9,216
BatchNorm2d-6	[-1, 32, 147, 147]	64
ReLU-7	[-1, 32, 147, 147]	0
BasicConv2d-8	[-1, 32, 147, 147]	0
Conv2d-9	[-1, 64, 147, 147]	18,432
BatchNorm2d-10	[-1, 64, 147, 147]	128
ReLU-11	[-1, 64, 147, 147]	0
BasicConv2d-12	[-1, 64, 147, 147]	0
MaxPool2d-13	[-1, 64, 73, 73]	0
Conv2d-14	[-1, 96, 73, 73]	55,296
BatchNorm2d-15	[-1, 96, 73, 73]	192
ReLU-16	[-1, 96, 73, 73]	0
BasicConv2d-17	[-1, 96, 73, 73]	0
Mixed_3a-18	[-1, 160, 73, 73]	0
Conv2d-19	[-1, 64, 73, 73]	10,240
BatchNorm2d-20	[-1, 64, 73, 73]	128
ReLU-21	[-1, 64, 73, 73]	0
BasicConv2d-22	[-1, 64, 73, 73]	0
Conv2d-23	[-1, 96, 71, 71]	55,296
BatchNorm2d-24	[-1, 96, 71, 71]	192
ReLU-25	[-1, 96, 71, 71]	0
BasicConv2d-26	[-1, 96, 71, 71]	0
Conv2d-27	[-1, 64, 73, 73]	10,240
BatchNorm2d-28	[-1, 64, 73, 73]	128
ReLU-29	[-1, 64, 73, 73]	0
BasicConv2d-30	[-1, 64, 73, 73]	0
Conv2d-31	[-1, 64, 73, 73]	28,672
BatchNorm2d-32	[-1, 64, 73, 73]	128
ReLU-33	[-1, 64, 73, 73]	0
BasicConv2d-34	[-1, 64, 73, 73]	0
Conv2d-35	[-1, 64, 73, 73]	28,672
BatchNorm2d-36	[-1, 64, 73, 73]	128
ReLU-37	[-1, 64, 73, 73]	0
BasicConv2d-38	[-1, 64, 73, 73]	0
Conv2d-39	[-1, 96, 71, 71]	55,296
BatchNorm2d-40	[-1, 96, 71, 71]	192
ReLU-41	[-1, 96, 71, 71]	0
BasicConv2d-42	[-1, 96, 71, 71]	0
Mixed_4a-43	[-1, 192, 71, 71]	0
Conv2d-44	[-1, 192, 35, 35]	331,776
BatchNorm2d-45	[-1, 192, 35, 35]	384
ReLU-46	[-1, 192, 35, 35]	0
BasicConv2d-47	[-1, 192, 35, 35]	0
MaxPool2d-48	[-1, 192, 35, 35]	0
Mixed_5a-49	[-1, 384, 35, 35]	0
Conv2d-50	[-1, 96, 35, 35]	36,864
BatchNorm2d-51	[-1, 96, 35, 35]	192
ReLU-52	[-1, 96, 35, 35]	0

BasicConv2d-53	[-1, 96, 35, 35]	0
Conv2d-54	[-1, 64, 35, 35]	24,576
BatchNorm2d-55	[-1, 64, 35, 35]	128
ReLU-56	[-1, 64, 35, 35]	0
BasicConv2d-57	[-1, 64, 35, 35]	0
Conv2d-58	[-1, 96, 35, 35]	55,296
BatchNorm2d-59	[-1, 96, 35, 35]	192
ReLU-60	[-1, 96, 35, 35]	0
BasicConv2d-61	[-1, 96, 35, 35]	0
Conv2d-62	[-1, 64, 35, 35]	24,576
BatchNorm2d-63	[-1, 64, 35, 35]	128
ReLU-64	[-1, 64, 35, 35]	0
BasicConv2d-65	[-1, 64, 35, 35]	0
Conv2d-66	[-1, 96, 35, 35]	55,296
BatchNorm2d-67	[-1, 96, 35, 35]	192
ReLU-68	[-1, 96, 35, 35]	0
BasicConv2d-69	[-1, 96, 35, 35]	0
Conv2d-70	[-1, 96, 35, 35]	82,944
BatchNorm2d-71	[-1, 96, 35, 35]	192
ReLU-72	[-1, 96, 35, 35]	0
BasicConv2d-73	[-1, 96, 35, 35]	0
AvgPool2d-74	[-1, 384, 35, 35]	0
Conv2d-75	[-1, 96, 35, 35]	36,864
BatchNorm2d-76	[-1, 96, 35, 35]	192
ReLU-77	[-1, 96, 35, 35]	0
BasicConv2d-78	[-1, 96, 35, 35]	0
Inception_A-79	[-1, 384, 35, 35]	0
Conv2d-80	[-1, 96, 35, 35]	36,864
BatchNorm2d-81	[-1, 96, 35, 35]	192
ReLU-82	[-1, 96, 35, 35]	0
BasicConv2d-83	[-1, 96, 35, 35]	0
Conv2d-84	[-1, 64, 35, 35]	24,576
BatchNorm2d-85	[-1, 64, 35, 35]	128
ReLU-86	[-1, 64, 35, 35]	0
BasicConv2d-87	[-1, 64, 35, 35]	0
Conv2d-88	[-1, 96, 35, 35]	55,296
BatchNorm2d-89	[-1, 96, 35, 35]	192
ReLU-90	[-1, 96, 35, 35]	0
BasicConv2d-91	[-1, 96, 35, 35]	0
Conv2d-92	[-1, 64, 35, 35]	24,576
BatchNorm2d-93	[-1, 64, 35, 35]	128
ReLU-94	[-1, 64, 35, 35]	0
BasicConv2d-95	[-1, 64, 35, 35]	0
Conv2d-96	[-1, 96, 35, 35]	55,296
BatchNorm2d-97	[-1, 96, 35, 35]	192
ReLU-98	[-1, 96, 35, 35]	0
BasicConv2d-99	[-1, 96, 35, 35]	0
Conv2d-100	[-1, 96, 35, 35]	82,944
BatchNorm2d-101	[-1, 96, 35, 35]	192
ReLU-102	[-1, 96, 35, 35]	0
BasicConv2d-103	[-1, 96, 35, 35]	0
AvgPool2d-104	[-1, 384, 35, 35]	0
Conv2d-105	[-1, 96, 35, 35]	36,864
BatchNorm2d-106	[-1, 96, 35, 35]	192
ReLU-107	[-1, 96, 35, 35]	0

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        BasicConv2d-108          [-1, 96, 35, 35]               0
        Inception_A-109         [-1, 384, 35, 35]               0
             Conv2d-110          [-1, 96, 35, 35]          36,864
        BatchNorm2d-111          [-1, 96, 35, 35]             192
               ReLU-112          [-1, 96, 35, 35]               0
        BasicConv2d-113          [-1, 96, 35, 35]               0
             Conv2d-114          [-1, 64, 35, 35]          24,576
        BatchNorm2d-115          [-1, 64, 35, 35]             128
               ReLU-116          [-1, 64, 35, 35]               0
        BasicConv2d-117          [-1, 64, 35, 35]               0
             Conv2d-118          [-1, 96, 35, 35]          55,296
        BatchNorm2d-119          [-1, 96, 35, 35]             192
               ReLU-120          [-1, 96, 35, 35]               0
        BasicConv2d-121          [-1, 96, 35, 35]               0
             Conv2d-122          [-1, 64, 35, 35]          24,576
        BatchNorm2d-123          [-1, 64, 35, 35]             128
               ReLU-124          [-1, 64, 35, 35]               0
        BasicConv2d-125          [-1, 64, 35, 35]               0
             Conv2d-126          [-1, 96, 35, 35]          55,296
        BatchNorm2d-127          [-1, 96, 35, 35]             192
               ReLU-128          [-1, 96, 35, 35]               0
        BasicConv2d-129          [-1, 96, 35, 35]               0
             Conv2d-130          [-1, 96, 35, 35]          82,944
        BatchNorm2d-131          [-1, 96, 35, 35]             192
               ReLU-132          [-1, 96, 35, 35]               0
        BasicConv2d-133          [-1, 96, 35, 35]               0
          AvgPool2d-134         [-1, 384, 35, 35]               0
             Conv2d-135          [-1, 96, 35, 35]          36,864
        BatchNorm2d-136          [-1, 96, 35, 35]             192
               ReLU-137          [-1, 96, 35, 35]               0
        BasicConv2d-138          [-1, 96, 35, 35]               0
        Inception_A-139         [-1, 384, 35, 35]               0
             Conv2d-140          [-1, 96, 35, 35]          36,864
        BatchNorm2d-141          [-1, 96, 35, 35]             192
               ReLU-142          [-1, 96, 35, 35]               0
        BasicConv2d-143          [-1, 96, 35, 35]               0
             Conv2d-144          [-1, 64, 35, 35]          24,576
        BatchNorm2d-145          [-1, 64, 35, 35]             128
               ReLU-146          [-1, 64, 35, 35]               0
        BasicConv2d-147          [-1, 64, 35, 35]               0
             Conv2d-148          [-1, 96, 35, 35]          55,296
        BatchNorm2d-149          [-1, 96, 35, 35]             192
               ReLU-150          [-1, 96, 35, 35]               0
        BasicConv2d-151          [-1, 96, 35, 35]               0
             Conv2d-152          [-1, 64, 35, 35]          24,576
        BatchNorm2d-153          [-1, 64, 35, 35]             128
               ReLU-154          [-1, 64, 35, 35]               0
        BasicConv2d-155          [-1, 64, 35, 35]               0
             Conv2d-156          [-1, 96, 35, 35]          55,296
        BatchNorm2d-157          [-1, 96, 35, 35]             192
               ReLU-158          [-1, 96, 35, 35]               0
        BasicConv2d-159          [-1, 96, 35, 35]               0
             Conv2d-160          [-1, 96, 35, 35]          82,944
        BatchNorm2d-161          [-1, 96, 35, 35]             192
               ReLU-162          [-1, 96, 35, 35]               0
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      BasicConv2d-163          [-1, 96, 35, 35]               0
        AvgPool2d-164         [-1, 384, 35, 35]               0
          Conv2d-165          [-1, 96, 35, 35]          36,864
     BatchNorm2d-166          [-1, 96, 35, 35]             192
            ReLU-167          [-1, 96, 35, 35]               0
     BasicConv2d-168          [-1, 96, 35, 35]               0
     Inception_A-169         [-1, 384, 35, 35]               0
          Conv2d-170         [-1, 384, 17, 17]       1,327,104
     BatchNorm2d-171         [-1, 384, 17, 17]             768
            ReLU-172         [-1, 384, 17, 17]               0
     BasicConv2d-173         [-1, 384, 17, 17]               0
          Conv2d-174         [-1, 192, 35, 35]          73,728
     BatchNorm2d-175         [-1, 192, 35, 35]             384
            ReLU-176         [-1, 192, 35, 35]               0
     BasicConv2d-177         [-1, 192, 35, 35]               0
          Conv2d-178         [-1, 224, 35, 35]         387,072
     BatchNorm2d-179         [-1, 224, 35, 35]             448
            ReLU-180         [-1, 224, 35, 35]               0
     BasicConv2d-181         [-1, 224, 35, 35]               0
          Conv2d-182         [-1, 256, 17, 17]         516,096
     BatchNorm2d-183         [-1, 256, 17, 17]             512
            ReLU-184         [-1, 256, 17, 17]               0
     BasicConv2d-185         [-1, 256, 17, 17]               0
       MaxPool2d-186         [-1, 384, 17, 17]               0
     Reduction_A-187        [-1, 1024, 17, 17]               0
          Conv2d-188         [-1, 384, 17, 17]         393,216
     BatchNorm2d-189         [-1, 384, 17, 17]             768
            ReLU-190         [-1, 384, 17, 17]               0
     BasicConv2d-191         [-1, 384, 17, 17]               0
          Conv2d-192         [-1, 192, 17, 17]         196,608
     BatchNorm2d-193         [-1, 192, 17, 17]             384
            ReLU-194         [-1, 192, 17, 17]               0
     BasicConv2d-195         [-1, 192, 17, 17]               0
          Conv2d-196         [-1, 224, 17, 17]         301,056
     BatchNorm2d-197         [-1, 224, 17, 17]             448
            ReLU-198         [-1, 224, 17, 17]               0
     BasicConv2d-199         [-1, 224, 17, 17]               0
          Conv2d-200         [-1, 256, 17, 17]         401,408
     BatchNorm2d-201         [-1, 256, 17, 17]             512
            ReLU-202         [-1, 256, 17, 17]               0
     BasicConv2d-203         [-1, 256, 17, 17]               0
          Conv2d-204         [-1, 192, 17, 17]         196,608
     BatchNorm2d-205         [-1, 192, 17, 17]             384
            ReLU-206         [-1, 192, 17, 17]               0
     BasicConv2d-207         [-1, 192, 17, 17]               0
          Conv2d-208         [-1, 192, 17, 17]         258,048
     BatchNorm2d-209         [-1, 192, 17, 17]             384
            ReLU-210         [-1, 192, 17, 17]               0
     BasicConv2d-211         [-1, 192, 17, 17]               0
          Conv2d-212         [-1, 224, 17, 17]         301,056
     BatchNorm2d-213         [-1, 224, 17, 17]             448
            ReLU-214         [-1, 224, 17, 17]               0
     BasicConv2d-215         [-1, 224, 17, 17]               0
          Conv2d-216         [-1, 224, 17, 17]         351,232
     BatchNorm2d-217         [-1, 224, 17, 17]             448
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              ReLU-218          [-1, 224, 17, 17]               0
       BasicConv2d-219          [-1, 224, 17, 17]               0
            Conv2d-220          [-1, 256, 17, 17]         401,408
       BatchNorm2d-221          [-1, 256, 17, 17]             512
              ReLU-222          [-1, 256, 17, 17]               0
       BasicConv2d-223          [-1, 256, 17, 17]               0
         AvgPool2d-224         [-1, 1024, 17, 17]               0
            Conv2d-225          [-1, 128, 17, 17]         131,072
       BatchNorm2d-226          [-1, 128, 17, 17]             256
              ReLU-227          [-1, 128, 17, 17]               0
       BasicConv2d-228          [-1, 128, 17, 17]               0
       Inception_B-229         [-1, 1024, 17, 17]               0
            Conv2d-230          [-1, 384, 17, 17]         393,216
       BatchNorm2d-231          [-1, 384, 17, 17]             768
              ReLU-232          [-1, 384, 17, 17]               0
       BasicConv2d-233          [-1, 384, 17, 17]               0
            Conv2d-234          [-1, 192, 17, 17]         196,608
       BatchNorm2d-235          [-1, 192, 17, 17]             384
              ReLU-236          [-1, 192, 17, 17]               0
       BasicConv2d-237          [-1, 192, 17, 17]               0
            Conv2d-238          [-1, 224, 17, 17]         301,056
       BatchNorm2d-239          [-1, 224, 17, 17]             448
              ReLU-240          [-1, 224, 17, 17]               0
       BasicConv2d-241          [-1, 224, 17, 17]               0
            Conv2d-242          [-1, 256, 17, 17]         401,408
       BatchNorm2d-243          [-1, 256, 17, 17]             512
              ReLU-244          [-1, 256, 17, 17]               0
       BasicConv2d-245          [-1, 256, 17, 17]               0
            Conv2d-246          [-1, 192, 17, 17]         196,608
       BatchNorm2d-247          [-1, 192, 17, 17]             384
              ReLU-248          [-1, 192, 17, 17]               0
       BasicConv2d-249          [-1, 192, 17, 17]               0
            Conv2d-250          [-1, 192, 17, 17]         258,048
       BatchNorm2d-251          [-1, 192, 17, 17]             384
              ReLU-252          [-1, 192, 17, 17]               0
       BasicConv2d-253          [-1, 192, 17, 17]               0
            Conv2d-254          [-1, 224, 17, 17]         301,056
       BatchNorm2d-255          [-1, 224, 17, 17]             448
              ReLU-256          [-1, 224, 17, 17]               0
       BasicConv2d-257          [-1, 224, 17, 17]               0
            Conv2d-258          [-1, 224, 17, 17]         351,232
       BatchNorm2d-259          [-1, 224, 17, 17]             448
              ReLU-260          [-1, 224, 17, 17]               0
       BasicConv2d-261          [-1, 224, 17, 17]               0
            Conv2d-262          [-1, 256, 17, 17]         401,408
       BatchNorm2d-263          [-1, 256, 17, 17]             512
              ReLU-264          [-1, 256, 17, 17]               0
       BasicConv2d-265          [-1, 256, 17, 17]               0
         AvgPool2d-266         [-1, 1024, 17, 17]               0
            Conv2d-267          [-1, 128, 17, 17]         131,072
       BatchNorm2d-268          [-1, 128, 17, 17]             256
              ReLU-269          [-1, 128, 17, 17]               0
       BasicConv2d-270          [-1, 128, 17, 17]               0
       Inception_B-271         [-1, 1024, 17, 17]               0
            Conv2d-272          [-1, 384, 17, 17]         393,216
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BatchNorm2d-273          [-1, 384, 17, 17]             768
       ReLU-274          [-1, 384, 17, 17]               0
BasicConv2d-275          [-1, 384, 17, 17]               0
     Conv2d-276          [-1, 192, 17, 17]         196,608
BatchNorm2d-277          [-1, 192, 17, 17]             384
       ReLU-278          [-1, 192, 17, 17]               0
BasicConv2d-279          [-1, 192, 17, 17]               0
     Conv2d-280          [-1, 224, 17, 17]         301,056
BatchNorm2d-281          [-1, 224, 17, 17]             448
       ReLU-282          [-1, 224, 17, 17]               0
BasicConv2d-283          [-1, 224, 17, 17]               0
     Conv2d-284          [-1, 256, 17, 17]         401,408
BatchNorm2d-285          [-1, 256, 17, 17]             512
       ReLU-286          [-1, 256, 17, 17]               0
BasicConv2d-287          [-1, 256, 17, 17]               0
     Conv2d-288          [-1, 192, 17, 17]         196,608
BatchNorm2d-289          [-1, 192, 17, 17]             384
       ReLU-290          [-1, 192, 17, 17]               0
BasicConv2d-291          [-1, 192, 17, 17]               0
     Conv2d-292          [-1, 192, 17, 17]         258,048
BatchNorm2d-293          [-1, 192, 17, 17]             384
       ReLU-294          [-1, 192, 17, 17]               0
BasicConv2d-295          [-1, 192, 17, 17]               0
     Conv2d-296          [-1, 224, 17, 17]         301,056
BatchNorm2d-297          [-1, 224, 17, 17]             448
       ReLU-298          [-1, 224, 17, 17]               0
BasicConv2d-299          [-1, 224, 17, 17]               0
     Conv2d-300          [-1, 224, 17, 17]         351,232
BatchNorm2d-301          [-1, 224, 17, 17]             448
       ReLU-302          [-1, 224, 17, 17]               0
BasicConv2d-303          [-1, 224, 17, 17]               0
     Conv2d-304          [-1, 256, 17, 17]         401,408
BatchNorm2d-305          [-1, 256, 17, 17]             512
       ReLU-306          [-1, 256, 17, 17]               0
BasicConv2d-307          [-1, 256, 17, 17]               0
  AvgPool2d-308         [-1, 1024, 17, 17]               0
     Conv2d-309          [-1, 128, 17, 17]         131,072
BatchNorm2d-310          [-1, 128, 17, 17]             256
       ReLU-311          [-1, 128, 17, 17]               0
BasicConv2d-312          [-1, 128, 17, 17]               0
Inception_B-313         [-1, 1024, 17, 17]               0
     Conv2d-314          [-1, 384, 17, 17]         393,216
BatchNorm2d-315          [-1, 384, 17, 17]             768
       ReLU-316          [-1, 384, 17, 17]               0
BasicConv2d-317          [-1, 384, 17, 17]               0
     Conv2d-318          [-1, 192, 17, 17]         196,608
BatchNorm2d-319          [-1, 192, 17, 17]             384
       ReLU-320          [-1, 192, 17, 17]               0
BasicConv2d-321          [-1, 192, 17, 17]               0
     Conv2d-322          [-1, 224, 17, 17]         301,056
BatchNorm2d-323          [-1, 224, 17, 17]             448
       ReLU-324          [-1, 224, 17, 17]               0
BasicConv2d-325          [-1, 224, 17, 17]               0
     Conv2d-326          [-1, 256, 17, 17]         401,408
BatchNorm2d-327          [-1, 256, 17, 17]             512
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              ReLU-328          [-1, 256, 17, 17]               0
       BasicConv2d-329          [-1, 256, 17, 17]               0
            Conv2d-330          [-1, 192, 17, 17]         196,608
       BatchNorm2d-331          [-1, 192, 17, 17]             384
              ReLU-332          [-1, 192, 17, 17]               0
       BasicConv2d-333          [-1, 192, 17, 17]               0
            Conv2d-334          [-1, 192, 17, 17]         258,048
       BatchNorm2d-335          [-1, 192, 17, 17]             384
              ReLU-336          [-1, 192, 17, 17]               0
       BasicConv2d-337          [-1, 192, 17, 17]               0
            Conv2d-338          [-1, 224, 17, 17]         301,056
       BatchNorm2d-339          [-1, 224, 17, 17]             448
              ReLU-340          [-1, 224, 17, 17]               0
       BasicConv2d-341          [-1, 224, 17, 17]               0
            Conv2d-342          [-1, 224, 17, 17]         351,232
       BatchNorm2d-343          [-1, 224, 17, 17]             448
              ReLU-344          [-1, 224, 17, 17]               0
       BasicConv2d-345          [-1, 224, 17, 17]               0
            Conv2d-346          [-1, 256, 17, 17]         401,408
       BatchNorm2d-347          [-1, 256, 17, 17]             512
              ReLU-348          [-1, 256, 17, 17]               0
       BasicConv2d-349          [-1, 256, 17, 17]               0
         AvgPool2d-350         [-1, 1024, 17, 17]               0
            Conv2d-351          [-1, 128, 17, 17]         131,072
       BatchNorm2d-352          [-1, 128, 17, 17]             256
              ReLU-353          [-1, 128, 17, 17]               0
       BasicConv2d-354          [-1, 128, 17, 17]               0
       Inception_B-355         [-1, 1024, 17, 17]               0
            Conv2d-356          [-1, 384, 17, 17]         393,216
       BatchNorm2d-357          [-1, 384, 17, 17]             768
              ReLU-358          [-1, 384, 17, 17]               0
       BasicConv2d-359          [-1, 384, 17, 17]               0
            Conv2d-360          [-1, 192, 17, 17]         196,608
       BatchNorm2d-361          [-1, 192, 17, 17]             384
              ReLU-362          [-1, 192, 17, 17]               0
       BasicConv2d-363          [-1, 192, 17, 17]               0
            Conv2d-364          [-1, 224, 17, 17]         301,056
       BatchNorm2d-365          [-1, 224, 17, 17]             448
              ReLU-366          [-1, 224, 17, 17]               0
       BasicConv2d-367          [-1, 224, 17, 17]               0
            Conv2d-368          [-1, 256, 17, 17]         401,408
       BatchNorm2d-369          [-1, 256, 17, 17]             512
              ReLU-370          [-1, 256, 17, 17]               0
       BasicConv2d-371          [-1, 256, 17, 17]               0
            Conv2d-372          [-1, 192, 17, 17]         196,608
       BatchNorm2d-373          [-1, 192, 17, 17]             384
              ReLU-374          [-1, 192, 17, 17]               0
       BasicConv2d-375          [-1, 192, 17, 17]               0
            Conv2d-376          [-1, 192, 17, 17]         258,048
       BatchNorm2d-377          [-1, 192, 17, 17]             384
              ReLU-378          [-1, 192, 17, 17]               0
       BasicConv2d-379          [-1, 192, 17, 17]               0
            Conv2d-380          [-1, 224, 17, 17]         301,056
       BatchNorm2d-381          [-1, 224, 17, 17]             448
              ReLU-382          [-1, 224, 17, 17]               0
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      BasicConv2d-383          [-1, 224, 17, 17]               0
           Conv2d-384          [-1, 224, 17, 17]         351,232
      BatchNorm2d-385          [-1, 224, 17, 17]             448
             ReLU-386          [-1, 224, 17, 17]               0
      BasicConv2d-387          [-1, 224, 17, 17]               0
           Conv2d-388          [-1, 256, 17, 17]         401,408
      BatchNorm2d-389          [-1, 256, 17, 17]             512
             ReLU-390          [-1, 256, 17, 17]               0
      BasicConv2d-391          [-1, 256, 17, 17]               0
        AvgPool2d-392         [-1, 1024, 17, 17]               0
           Conv2d-393          [-1, 128, 17, 17]         131,072
      BatchNorm2d-394          [-1, 128, 17, 17]             256
             ReLU-395          [-1, 128, 17, 17]               0
      BasicConv2d-396          [-1, 128, 17, 17]               0
      Inception_B-397         [-1, 1024, 17, 17]               0
           Conv2d-398          [-1, 384, 17, 17]         393,216
      BatchNorm2d-399          [-1, 384, 17, 17]             768
             ReLU-400          [-1, 384, 17, 17]               0
      BasicConv2d-401          [-1, 384, 17, 17]               0
           Conv2d-402          [-1, 192, 17, 17]         196,608
      BatchNorm2d-403          [-1, 192, 17, 17]             384
             ReLU-404          [-1, 192, 17, 17]               0
      BasicConv2d-405          [-1, 192, 17, 17]               0
           Conv2d-406          [-1, 224, 17, 17]         301,056
      BatchNorm2d-407          [-1, 224, 17, 17]             448
             ReLU-408          [-1, 224, 17, 17]               0
      BasicConv2d-409          [-1, 224, 17, 17]               0
           Conv2d-410          [-1, 256, 17, 17]         401,408
      BatchNorm2d-411          [-1, 256, 17, 17]             512
             ReLU-412          [-1, 256, 17, 17]               0
      BasicConv2d-413          [-1, 256, 17, 17]               0
           Conv2d-414          [-1, 192, 17, 17]         196,608
      BatchNorm2d-415          [-1, 192, 17, 17]             384
             ReLU-416          [-1, 192, 17, 17]               0
      BasicConv2d-417          [-1, 192, 17, 17]               0
           Conv2d-418          [-1, 192, 17, 17]         258,048
      BatchNorm2d-419          [-1, 192, 17, 17]             384
             ReLU-420          [-1, 192, 17, 17]               0
      BasicConv2d-421          [-1, 192, 17, 17]               0
           Conv2d-422          [-1, 224, 17, 17]         301,056
      BatchNorm2d-423          [-1, 224, 17, 17]             448
             ReLU-424          [-1, 224, 17, 17]               0
      BasicConv2d-425          [-1, 224, 17, 17]               0
           Conv2d-426          [-1, 224, 17, 17]         351,232
      BatchNorm2d-427          [-1, 224, 17, 17]             448
             ReLU-428          [-1, 224, 17, 17]               0
      BasicConv2d-429          [-1, 224, 17, 17]               0
           Conv2d-430          [-1, 256, 17, 17]         401,408
      BatchNorm2d-431          [-1, 256, 17, 17]             512
             ReLU-432          [-1, 256, 17, 17]               0
      BasicConv2d-433          [-1, 256, 17, 17]               0
        AvgPool2d-434         [-1, 1024, 17, 17]               0
           Conv2d-435          [-1, 128, 17, 17]         131,072
      BatchNorm2d-436          [-1, 128, 17, 17]             256
             ReLU-437          [-1, 128, 17, 17]               0
```

```
BasicConv2d-438          [-1, 128, 17, 17]               0
Inception_B-439         [-1, 1024, 17, 17]               0
     Conv2d-440          [-1, 384, 17, 17]         393,216
BatchNorm2d-441          [-1, 384, 17, 17]             768
       ReLU-442          [-1, 384, 17, 17]               0
BasicConv2d-443          [-1, 384, 17, 17]               0
     Conv2d-444          [-1, 192, 17, 17]         196,608
BatchNorm2d-445          [-1, 192, 17, 17]             384
       ReLU-446          [-1, 192, 17, 17]               0
BasicConv2d-447          [-1, 192, 17, 17]               0
     Conv2d-448          [-1, 224, 17, 17]         301,056
BatchNorm2d-449          [-1, 224, 17, 17]             448
       ReLU-450          [-1, 224, 17, 17]               0
BasicConv2d-451          [-1, 224, 17, 17]               0
     Conv2d-452          [-1, 256, 17, 17]         401,408
BatchNorm2d-453          [-1, 256, 17, 17]             512
       ReLU-454          [-1, 256, 17, 17]               0
BasicConv2d-455          [-1, 256, 17, 17]               0
     Conv2d-456          [-1, 192, 17, 17]         196,608
BatchNorm2d-457          [-1, 192, 17, 17]             384
       ReLU-458          [-1, 192, 17, 17]               0
BasicConv2d-459          [-1, 192, 17, 17]               0
     Conv2d-460          [-1, 192, 17, 17]         258,048
BatchNorm2d-461          [-1, 192, 17, 17]             384
       ReLU-462          [-1, 192, 17, 17]               0
BasicConv2d-463          [-1, 192, 17, 17]               0
     Conv2d-464          [-1, 224, 17, 17]         301,056
BatchNorm2d-465          [-1, 224, 17, 17]             448
       ReLU-466          [-1, 224, 17, 17]               0
BasicConv2d-467          [-1, 224, 17, 17]               0
     Conv2d-468          [-1, 224, 17, 17]         351,232
BatchNorm2d-469          [-1, 224, 17, 17]             448
       ReLU-470          [-1, 224, 17, 17]               0
BasicConv2d-471          [-1, 224, 17, 17]               0
     Conv2d-472          [-1, 256, 17, 17]         401,408
BatchNorm2d-473          [-1, 256, 17, 17]             512
       ReLU-474          [-1, 256, 17, 17]               0
BasicConv2d-475          [-1, 256, 17, 17]               0
  AvgPool2d-476         [-1, 1024, 17, 17]               0
     Conv2d-477          [-1, 128, 17, 17]         131,072
BatchNorm2d-478          [-1, 128, 17, 17]             256
       ReLU-479          [-1, 128, 17, 17]               0
BasicConv2d-480          [-1, 128, 17, 17]               0
Inception_B-481         [-1, 1024, 17, 17]               0
     Conv2d-482          [-1, 192, 17, 17]         196,608
BatchNorm2d-483          [-1, 192, 17, 17]             384
       ReLU-484          [-1, 192, 17, 17]               0
BasicConv2d-485          [-1, 192, 17, 17]               0
     Conv2d-486            [-1, 192, 8, 8]         331,776
BatchNorm2d-487            [-1, 192, 8, 8]             384
       ReLU-488            [-1, 192, 8, 8]               0
BasicConv2d-489            [-1, 192, 8, 8]               0
     Conv2d-490          [-1, 256, 17, 17]         262,144
BatchNorm2d-491          [-1, 256, 17, 17]             512
       ReLU-492          [-1, 256, 17, 17]               0
```

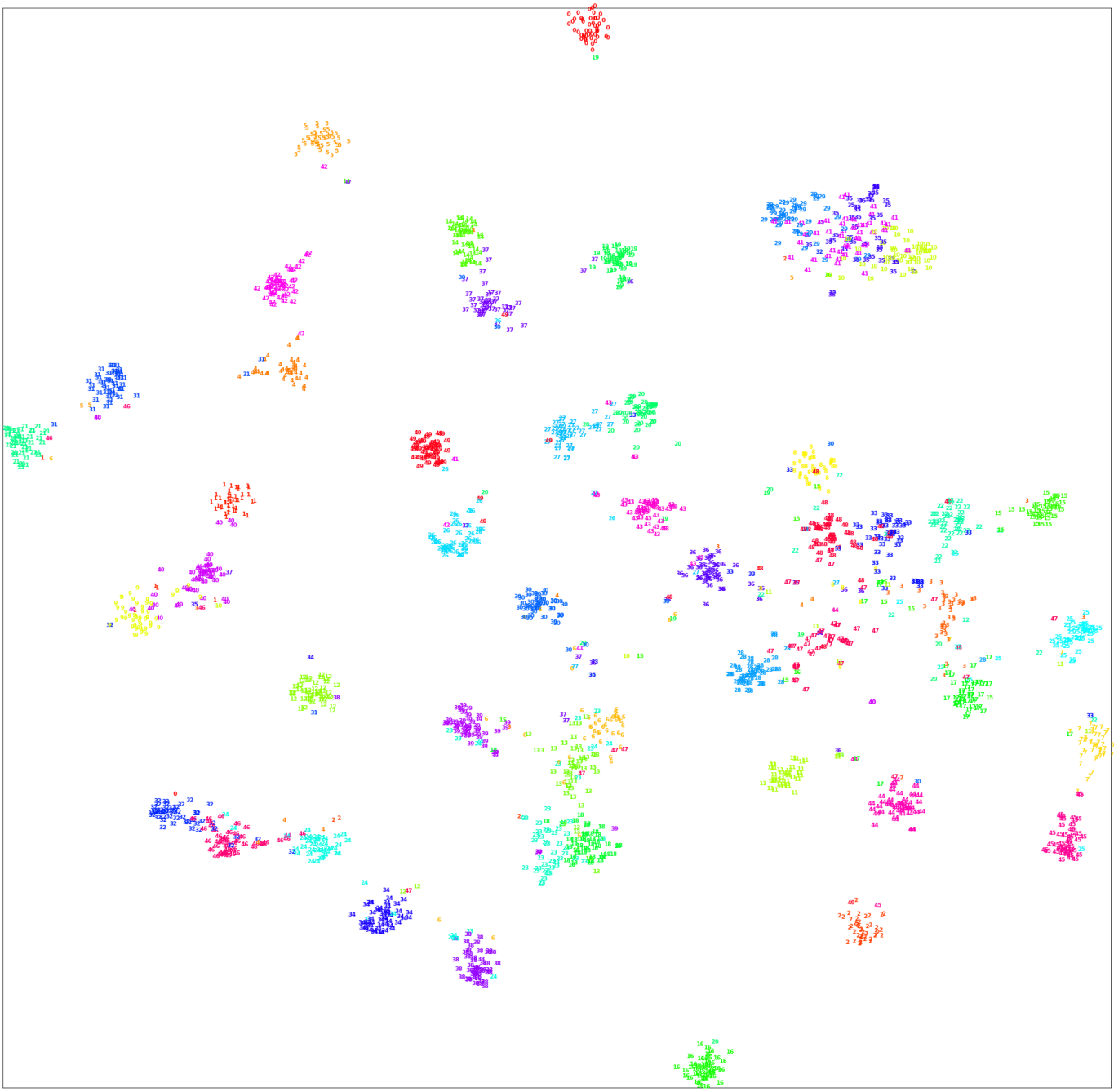
```
        BasicConv2d-493          [-1, 256, 17, 17]               0
             Conv2d-494          [-1, 256, 17, 17]         458,752
        BatchNorm2d-495          [-1, 256, 17, 17]             512
               ReLU-496          [-1, 256, 17, 17]               0
        BasicConv2d-497          [-1, 256, 17, 17]               0
             Conv2d-498          [-1, 320, 17, 17]         573,440
        BatchNorm2d-499          [-1, 320, 17, 17]             640
               ReLU-500          [-1, 320, 17, 17]               0
        BasicConv2d-501          [-1, 320, 17, 17]               0
             Conv2d-502            [-1, 320, 8, 8]         921,600
        BatchNorm2d-503            [-1, 320, 8, 8]             640
               ReLU-504            [-1, 320, 8, 8]               0
        BasicConv2d-505            [-1, 320, 8, 8]               0
          MaxPool2d-506           [-1, 1024, 8, 8]               0
        Reduction_B-507           [-1, 1536, 8, 8]               0
             Conv2d-508            [-1, 256, 8, 8]         393,216
        BatchNorm2d-509            [-1, 256, 8, 8]             512
               ReLU-510            [-1, 256, 8, 8]               0
        BasicConv2d-511            [-1, 256, 8, 8]               0
             Conv2d-512            [-1, 384, 8, 8]         589,824
        BatchNorm2d-513            [-1, 384, 8, 8]             768
               ReLU-514            [-1, 384, 8, 8]               0
        BasicConv2d-515            [-1, 384, 8, 8]               0
             Conv2d-516            [-1, 256, 8, 8]         294,912
        BatchNorm2d-517            [-1, 256, 8, 8]             512
               ReLU-518            [-1, 256, 8, 8]               0
        BasicConv2d-519            [-1, 256, 8, 8]               0
             Conv2d-520            [-1, 256, 8, 8]         294,912
        BatchNorm2d-521            [-1, 256, 8, 8]             512
               ReLU-522            [-1, 256, 8, 8]               0
        BasicConv2d-523            [-1, 256, 8, 8]               0
             Conv2d-524            [-1, 384, 8, 8]         589,824
        BatchNorm2d-525            [-1, 384, 8, 8]             768
               ReLU-526            [-1, 384, 8, 8]               0
        BasicConv2d-527            [-1, 384, 8, 8]               0
             Conv2d-528            [-1, 448, 8, 8]         516,096
        BatchNorm2d-529            [-1, 448, 8, 8]             896
               ReLU-530            [-1, 448, 8, 8]               0
        BasicConv2d-531            [-1, 448, 8, 8]               0
             Conv2d-532            [-1, 512, 8, 8]         688,128
        BatchNorm2d-533            [-1, 512, 8, 8]           1,024
               ReLU-534            [-1, 512, 8, 8]               0
        BasicConv2d-535            [-1, 512, 8, 8]               0
             Conv2d-536            [-1, 256, 8, 8]         393,216
        BatchNorm2d-537            [-1, 256, 8, 8]             512
               ReLU-538            [-1, 256, 8, 8]               0
        BasicConv2d-539            [-1, 256, 8, 8]               0
             Conv2d-540            [-1, 256, 8, 8]         393,216
        BatchNorm2d-541            [-1, 256, 8, 8]             512
               ReLU-542            [-1, 256, 8, 8]               0
        BasicConv2d-543            [-1, 256, 8, 8]               0
          AvgPool2d-544           [-1, 1536, 8, 8]               0
             Conv2d-545            [-1, 256, 8, 8]         393,216
        BatchNorm2d-546            [-1, 256, 8, 8]             512
               ReLU-547            [-1, 256, 8, 8]               0
```

```
BasicConv2d-548          [-1, 256, 8, 8]               0
Inception_C-549         [-1, 1536, 8, 8]               0
     Conv2d-550          [-1, 256, 8, 8]         393,216
BatchNorm2d-551          [-1, 256, 8, 8]             512
       ReLU-552          [-1, 256, 8, 8]               0
BasicConv2d-553          [-1, 256, 8, 8]               0
     Conv2d-554          [-1, 384, 8, 8]         589,824
BatchNorm2d-555          [-1, 384, 8, 8]             768
       ReLU-556          [-1, 384, 8, 8]               0
BasicConv2d-557          [-1, 384, 8, 8]               0
     Conv2d-558          [-1, 256, 8, 8]         294,912
BatchNorm2d-559          [-1, 256, 8, 8]             512
       ReLU-560          [-1, 256, 8, 8]               0
BasicConv2d-561          [-1, 256, 8, 8]               0
     Conv2d-562          [-1, 256, 8, 8]         294,912
BatchNorm2d-563          [-1, 256, 8, 8]             512
       ReLU-564          [-1, 256, 8, 8]               0
BasicConv2d-565          [-1, 256, 8, 8]               0
     Conv2d-566          [-1, 384, 8, 8]         589,824
BatchNorm2d-567          [-1, 384, 8, 8]             768
       ReLU-568          [-1, 384, 8, 8]               0
BasicConv2d-569          [-1, 384, 8, 8]               0
     Conv2d-570          [-1, 448, 8, 8]         516,096
BatchNorm2d-571          [-1, 448, 8, 8]             896
       ReLU-572          [-1, 448, 8, 8]               0
BasicConv2d-573          [-1, 448, 8, 8]               0
     Conv2d-574          [-1, 512, 8, 8]         688,128
BatchNorm2d-575          [-1, 512, 8, 8]           1,024
       ReLU-576          [-1, 512, 8, 8]               0
BasicConv2d-577          [-1, 512, 8, 8]               0
     Conv2d-578          [-1, 256, 8, 8]         393,216
BatchNorm2d-579          [-1, 256, 8, 8]             512
       ReLU-580          [-1, 256, 8, 8]               0
BasicConv2d-581          [-1, 256, 8, 8]               0
     Conv2d-582          [-1, 256, 8, 8]         393,216
BatchNorm2d-583          [-1, 256, 8, 8]             512
       ReLU-584          [-1, 256, 8, 8]               0
BasicConv2d-585          [-1, 256, 8, 8]               0
  AvgPool2d-586         [-1, 1536, 8, 8]               0
     Conv2d-587          [-1, 256, 8, 8]         393,216
BatchNorm2d-588          [-1, 256, 8, 8]             512
       ReLU-589          [-1, 256, 8, 8]               0
BasicConv2d-590          [-1, 256, 8, 8]               0
Inception_C-591         [-1, 1536, 8, 8]               0
     Conv2d-592          [-1, 256, 8, 8]         393,216
BatchNorm2d-593          [-1, 256, 8, 8]             512
       ReLU-594          [-1, 256, 8, 8]               0
BasicConv2d-595          [-1, 256, 8, 8]               0
     Conv2d-596          [-1, 384, 8, 8]         589,824
BatchNorm2d-597          [-1, 384, 8, 8]             768
       ReLU-598          [-1, 384, 8, 8]               0
BasicConv2d-599          [-1, 384, 8, 8]               0
     Conv2d-600          [-1, 256, 8, 8]         294,912
BatchNorm2d-601          [-1, 256, 8, 8]             512
       ReLU-602          [-1, 256, 8, 8]               0
```

```
        BasicConv2d-603            [-1, 256, 8, 8]               0
             Conv2d-604            [-1, 256, 8, 8]         294,912
        BatchNorm2d-605            [-1, 256, 8, 8]             512
               ReLU-606            [-1, 256, 8, 8]               0
        BasicConv2d-607            [-1, 256, 8, 8]               0
             Conv2d-608            [-1, 384, 8, 8]         589,824
        BatchNorm2d-609            [-1, 384, 8, 8]             768
               ReLU-610            [-1, 384, 8, 8]               0
        BasicConv2d-611            [-1, 384, 8, 8]               0
             Conv2d-612            [-1, 448, 8, 8]         516,096
        BatchNorm2d-613            [-1, 448, 8, 8]             896
               ReLU-614            [-1, 448, 8, 8]               0
        BasicConv2d-615            [-1, 448, 8, 8]               0
             Conv2d-616            [-1, 512, 8, 8]         688,128
        BatchNorm2d-617            [-1, 512, 8, 8]           1,024
               ReLU-618            [-1, 512, 8, 8]               0
        BasicConv2d-619            [-1, 512, 8, 8]               0
             Conv2d-620            [-1, 256, 8, 8]         393,216
        BatchNorm2d-621            [-1, 256, 8, 8]             512
               ReLU-622            [-1, 256, 8, 8]               0
        BasicConv2d-623            [-1, 256, 8, 8]               0
             Conv2d-624            [-1, 256, 8, 8]         393,216
        BatchNorm2d-625            [-1, 256, 8, 8]             512
               ReLU-626            [-1, 256, 8, 8]               0
        BasicConv2d-627            [-1, 256, 8, 8]               0
          AvgPool2d-628           [-1, 1536, 8, 8]               0
             Conv2d-629            [-1, 256, 8, 8]         393,216
        BatchNorm2d-630            [-1, 256, 8, 8]             512
               ReLU-631            [-1, 256, 8, 8]               0
        BasicConv2d-632            [-1, 256, 8, 8]               0
        Inception_C-633           [-1, 1536, 8, 8]               0
             Linear-634                 [-1, 1000]       1,537,000
        InceptionV4-635                 [-1, 1000]               0
               SiLU-636                 [-1, 1000]               0
             Linear-637                   [-1, 50]          50,050
================================================================
Total params: 42,729,866
Trainable params: 42,729,866
Non-trainable params: 0
----------------------------------------------------------------
Input size (MB): 1.02
Forward/backward pass size (MB): 551.56
Params size (MB): 163.00
Estimated Total Size (MB): 715.58
----------------------------------------------------------------
```

2. 0.868000

3. TSNE



Most classes are separated clearly, but a few are overlapped, they may be similar classes that result in prediction errors.

P2

1.

```
----------------------------------------------------------------
        Layer (type)               Output Shape         Param #
================================================================
            Conv2d-1         [-1, 64, 710, 710]           1,792
              ReLU-2         [-1, 64, 710, 710]               0
            Conv2d-3         [-1, 64, 710, 710]          36,928
              ReLU-4         [-1, 64, 710, 710]               0
         MaxPool2d-5         [-1, 64, 355, 355]               0
            Conv2d-6        [-1, 128, 355, 355]          73,856
              ReLU-7        [-1, 128, 355, 355]               0
            Conv2d-8        [-1, 128, 355, 355]         147,584
              ReLU-9        [-1, 128, 355, 355]               0
        MaxPool2d-10        [-1, 128, 178, 178]               0
           Conv2d-11        [-1, 256, 178, 178]         295,168
             ReLU-12        [-1, 256, 178, 178]               0
           Conv2d-13        [-1, 256, 178, 178]         590,080
             ReLU-14        [-1, 256, 178, 178]               0
           Conv2d-15        [-1, 256, 178, 178]         590,080
             ReLU-16        [-1, 256, 178, 178]               0
        MaxPool2d-17          [-1, 256, 89, 89]               0
           Conv2d-18          [-1, 512, 89, 89]       1,180,160
             ReLU-19          [-1, 512, 89, 89]               0
           Conv2d-20          [-1, 512, 89, 89]       2,359,808
             ReLU-21          [-1, 512, 89, 89]               0
           Conv2d-22          [-1, 512, 89, 89]       2,359,808
             ReLU-23          [-1, 512, 89, 89]               0
        MaxPool2d-24          [-1, 512, 45, 45]               0
           Conv2d-25          [-1, 512, 45, 45]       2,359,808
             ReLU-26          [-1, 512, 45, 45]               0
           Conv2d-27          [-1, 512, 45, 45]       2,359,808
             ReLU-28          [-1, 512, 45, 45]               0
           Conv2d-29          [-1, 512, 45, 45]       2,359,808
             ReLU-30          [-1, 512, 45, 45]               0
        MaxPool2d-31          [-1, 512, 23, 23]               0
           Conv2d-32        [-1, 4096, 17, 17]     102,764,544
             ReLU-33        [-1, 4096, 17, 17]               0
          Dropout-34        [-1, 4096, 17, 17]               0
           Conv2d-35        [-1, 4096, 17, 17]      16,781,312
             ReLU-36        [-1, 4096, 17, 17]               0
          Dropout-37        [-1, 4096, 17, 17]               0
           Conv2d-38           [-1, 7, 17, 17]          28,679
  ConvTranspose2d-39          [-1, 7, 576, 576]         200,704
================================================================
Total params: 134,489,927
Trainable params: 134,489,927
Non-trainable params: 0
----------------------------------------------------------------
Input size (MB): 3.00
Forward/backward pass size (MB): 2271.11
Params size (MB): 513.04
Estimated Total Size (MB): 2787.15
----------------------------------------------------------------
```

2.

```
    Concat(
      (modelA): DeepLabV3(
        (backbone): IntermediateLayerGetter(
          (conv1): Conv2d(3, 64, kernel_size=(7, 7), stride=(2, 2), padding=(3, 3),
          (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_runnin
          (relu): ReLU(inplace=True)
          (maxpool): MaxPool2d(kernel_size=3, stride=2, padding=1, dilation=1, ceil
          (layer1): Sequential(
            (0): Bottleneck(
              (conv1): Conv2d(64, 64, kernel_size=(1, 1), stride=(1, 1), bias=False
              (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_ru
              (conv2): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1
              (bn2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_ru
              (conv3): Conv2d(64, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fals
              (bn3): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
              (relu): ReLU(inplace=True)
              (downsample): Sequential(
                (0): Conv2d(64, 256, kernel_size=(1, 1), stride=(1, 1), bias=False)
                (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
              )
            )
            (1): Bottleneck(
              (conv1): Conv2d(256, 64, kernel_size=(1, 1), stride=(1, 1), bias=Fals
              (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_ru
              (conv2): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1
              (bn2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_ru
              (conv3): Conv2d(64, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fals
              (bn3): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
              (relu): ReLU(inplace=True)
            )
            (2): Bottleneck(
              (conv1): Conv2d(256, 64, kernel_size=(1, 1), stride=(1, 1), bias=Fals
              (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_ru
              (conv2): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1
              (bn2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_ru
              (conv3): Conv2d(64, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fals
              (bn3): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
              (relu): ReLU(inplace=True)
            )
          )
          (layer2): Sequential(
            (0): Bottleneck(
              (conv1): Conv2d(256, 128, kernel_size=(1, 1), stride=(1, 1), bias=Fal
              (bn1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
              (conv2): Conv2d(128, 128, kernel_size=(3, 3), stride=(2, 2), padding=
              (bn2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
              (conv3): Conv2d(128, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fal
              (bn3): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
              (relu): ReLU(inplace=True)
              (downsample): Sequential(
                (0): Conv2d(256, 512, kernel_size=(1, 1), stride=(2, 2), bias=False
                (1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
              )
            )
```

```
    (1): Bottleneck(
      (conv1): Conv2d(512, 128, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(128, 128, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(128, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn3): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (relu): ReLU(inplace=True)
    )
    (2): Bottleneck(
      (conv1): Conv2d(512, 128, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(128, 128, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(128, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn3): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (relu): ReLU(inplace=True)
    )
    (3): Bottleneck(
      (conv1): Conv2d(512, 128, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(128, 128, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(128, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn3): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (relu): ReLU(inplace=True)
    )
  )
  (layer3): Sequential(
    (0): Bottleneck(
      (conv1): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fal
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(256, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
      (downsample): Sequential(
        (0): Conv2d(512, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fals
        (1): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      )
    )
    (1): Bottleneck(
      (conv1): Conv2d(1024, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(256, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
    )
    (2): Bottleneck(
      (conv1): Conv2d(1024, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=
```

```
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(256, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
    )
    (3): Bottleneck(
      (conv1): Conv2d(1024, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(256, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
    )
    (4): Bottleneck(
      (conv1): Conv2d(1024, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(256, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
    )
    (5): Bottleneck(
      (conv1): Conv2d(1024, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(256, 1024, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
    )
  )
  (layer4): Sequential(
    (0): Bottleneck(
      (conv1): Conv2d(1024, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(512, 512, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(512, 2048, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(2048, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
      (downsample): Sequential(
        (0): Conv2d(1024, 2048, kernel_size=(1, 1), stride=(1, 1), bias=Fal
        (1): BatchNorm2d(2048, eps=1e-05, momentum=0.1, affine=True, track_
      )
    )
    (1): Bottleneck(
      (conv1): Conv2d(2048, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv2): Conv2d(512, 512, kernel_size=(3, 3), stride=(1, 1), padding=
      (bn2): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
      (conv3): Conv2d(512, 2048, kernel_size=(1, 1), stride=(1, 1), bias=Fa
      (bn3): BatchNorm2d(2048, eps=1e-05, momentum=0.1, affine=True, track_
      (relu): ReLU(inplace=True)
```

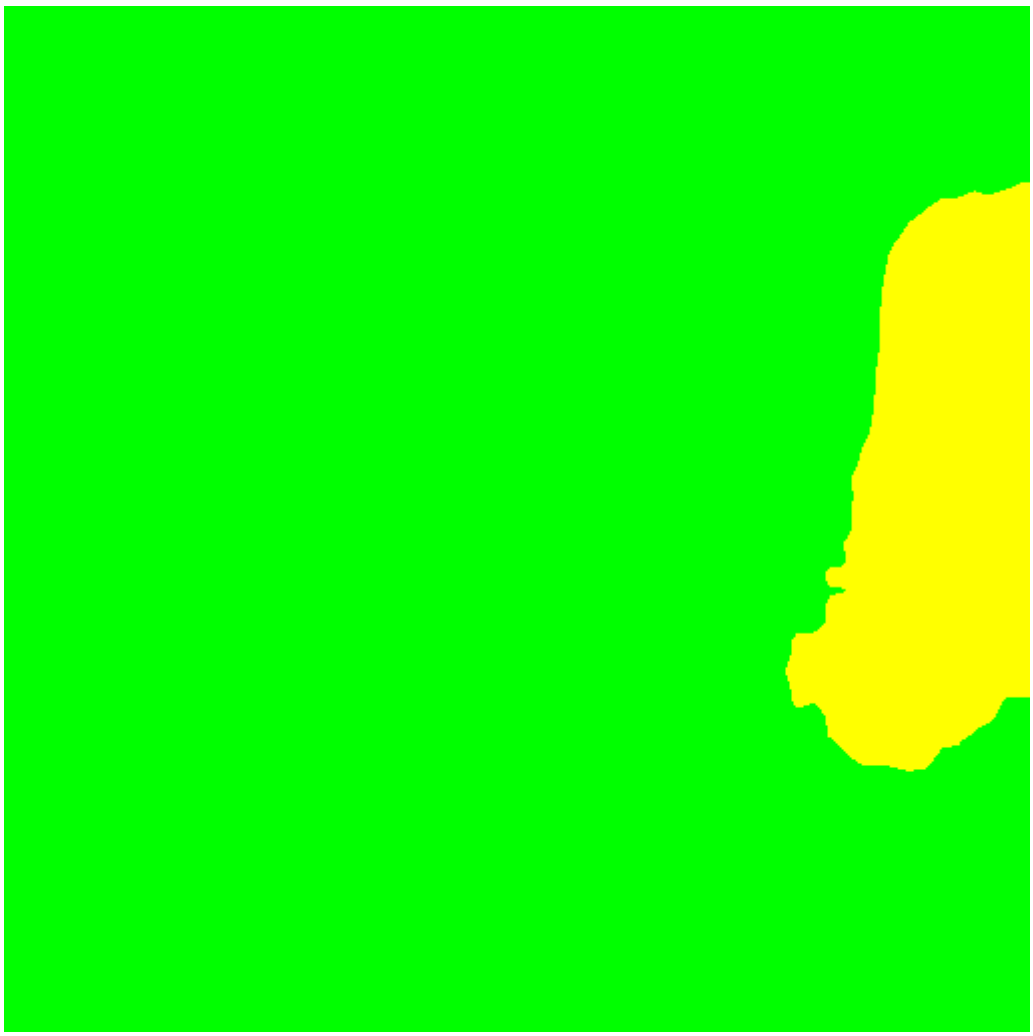
```
            )
            (2): Bottleneck(
              (conv1): Conv2d(2048, 512, kernel_size=(1, 1), stride=(1, 1), bias=Fa
              (bn1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
              (conv2): Conv2d(512, 512, kernel_size=(3, 3), stride=(1, 1), padding=
              (bn2): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_r
              (conv3): Conv2d(512, 2048, kernel_size=(1, 1), stride=(1, 1), bias=Fa
              (bn3): BatchNorm2d(2048, eps=1e-05, momentum=0.1, affine=True, track_
              (relu): ReLU(inplace=True)
            )
          )
        )
        (classifier): DeepLabHead(
          (0): ASPP(
            (convs): ModuleList(
              (0): Sequential(
                (0): Conv2d(2048, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fals
                (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
                (2): ReLU()
              )
              (1): ASPPConv(
                (0): Conv2d(2048, 256, kernel_size=(3, 3), stride=(1, 1), padding=(
                (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
                (2): ReLU()
              )
              (2): ASPPConv(
                (0): Conv2d(2048, 256, kernel_size=(3, 3), stride=(1, 1), padding=(
                (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
                (2): ReLU()
              )
              (3): ASPPConv(
                (0): Conv2d(2048, 256, kernel_size=(3, 3), stride=(1, 1), padding=(
                (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
                (2): ReLU()
              )
              (4): ASPPPooling(
                (0): AdaptiveAvgPool2d(output_size=1)
                (1): Conv2d(2048, 256, kernel_size=(1, 1), stride=(1, 1), bias=Fals
                (2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_r
                (3): ReLU()
              )
            )
            (project): Sequential(
              (0): Conv2d(1280, 256, kernel_size=(1, 1), stride=(1, 1), bias=False)
              (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_run
              (2): ReLU()
              (3): Dropout(p=0.5, inplace=False)
            )
          )
          (1): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
          (2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running
          (3): ReLU()
          (4): Conv2d(256, 21, kernel_size=(1, 1), stride=(1, 1))
        )
        (aux_classifier): FCNHead(
```

```
        (0): Conv2d(1024, 256, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
        (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running
        (2): ReLU()
        (3): Dropout(p=0.1, inplace=False)
        (4): Conv2d(256, 21, kernel_size=(1, 1), stride=(1, 1))
      )
    )
    (bn): BatchNorm2d(21, eps=1e-05, momentum=0.1, affine=True, track_running_sta
    (ac): SiLU()
    (last_layer): Conv2d(21, 7, kernel_size=(1, 1), stride=(1, 1))
  )
```

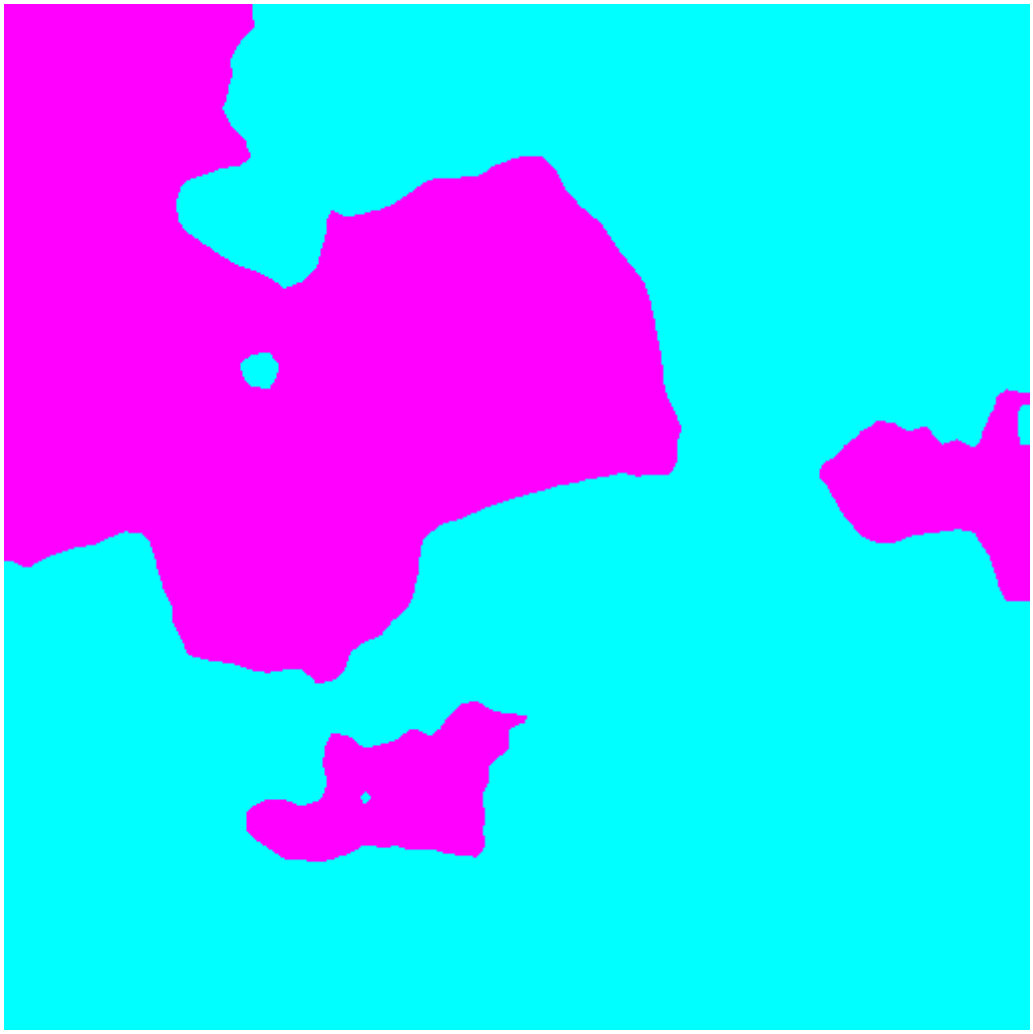
3. 0.749084
4.

0010_early

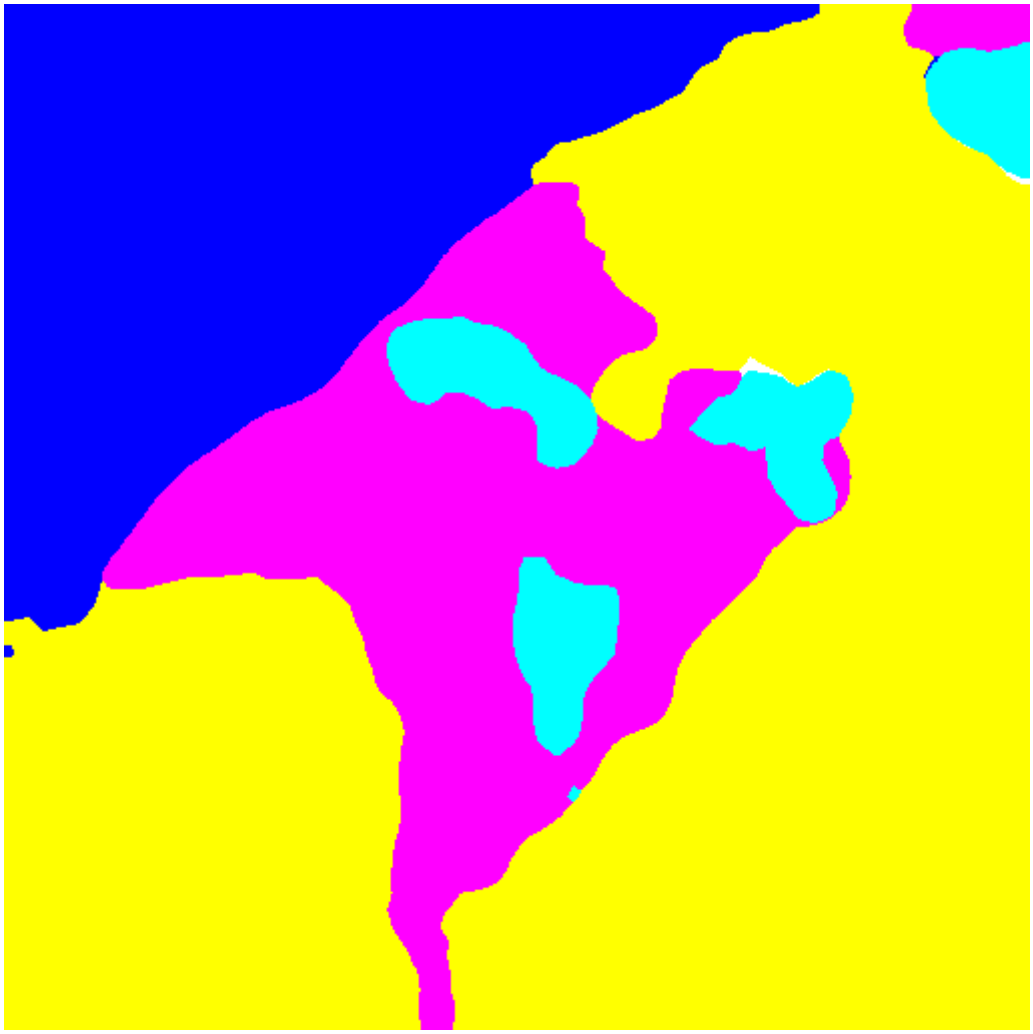
0097_early



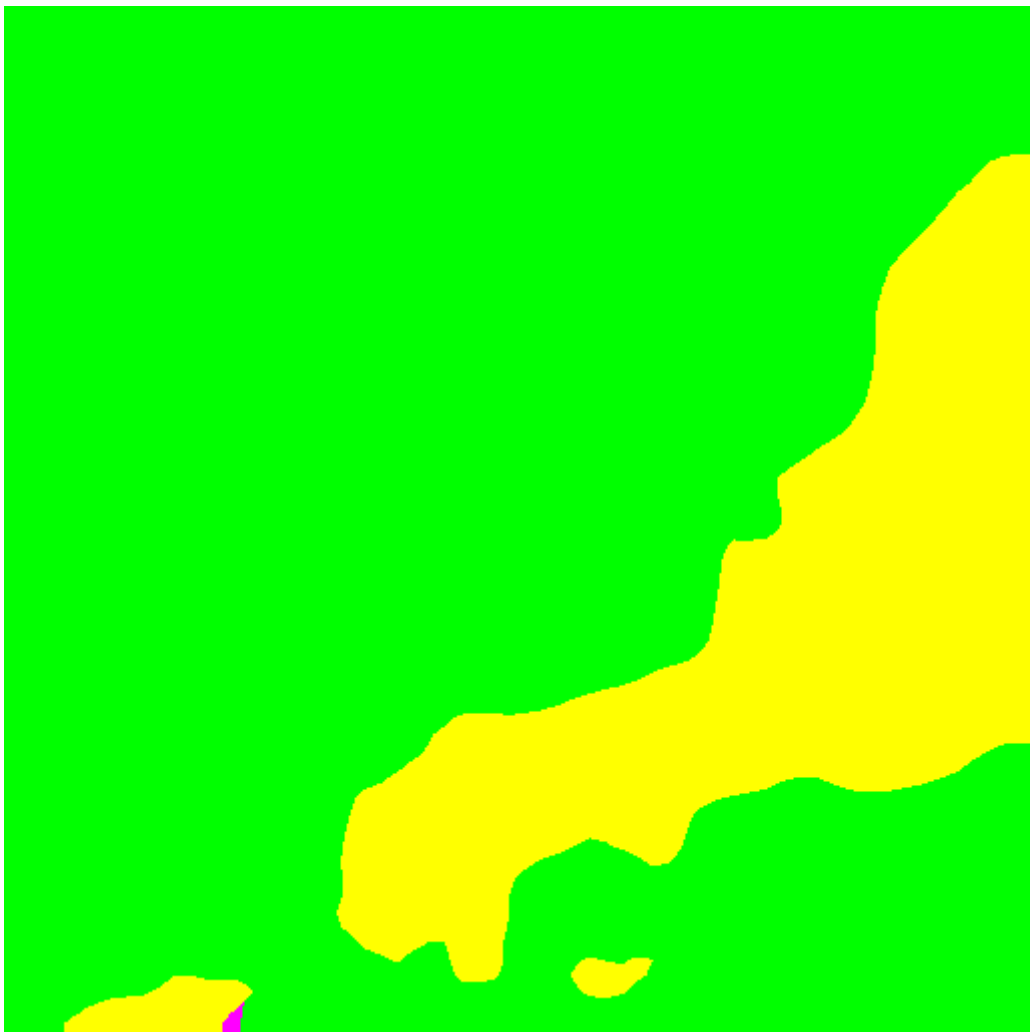
0107_early



0010_mid



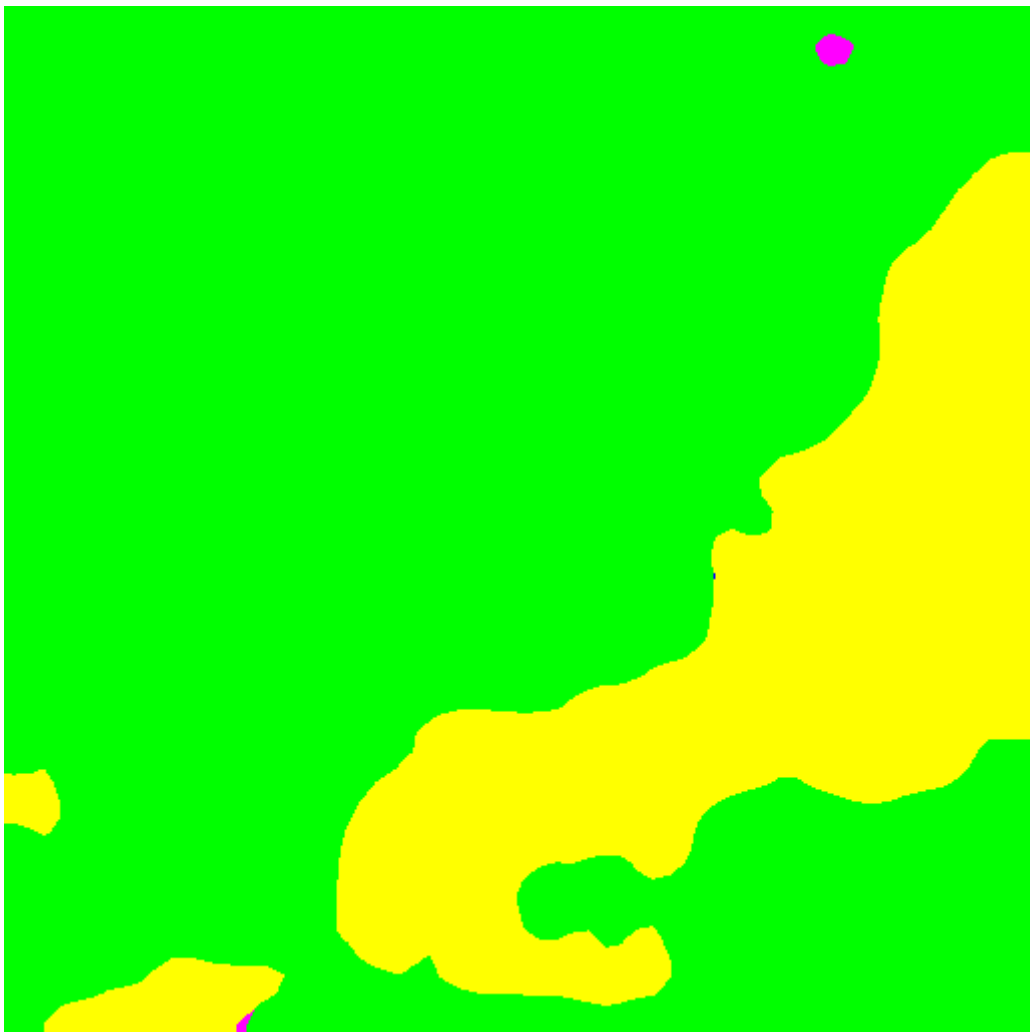
0097_mid



0107_mid

0010_fin

0097_fin



0107_fin

reference:

https://github.com/Cadene/pretrained-models.pytorch/blob/master/pretrainedmodels/models/inceptionv4.py
(https://github.com/Cadene/pretrained-models.pytorch/blob/master/pretrainedmodels/models/inceptionv4.py)