Oct 04, 18 1:08	IFAR10ResOl	UT.txt	Page 1/15		
(venv) ostap@ostap-All-Series:~/					
es.py Using TensorFlow backend. (32, 32, 3)					
(40000, 32, 32, 3) (40000, 1) (1 Training features shape: (40000		(10000, 1)			
Validation features shape: (100	00, 32, 32, 3)				
Test features shape: (10000, 32 hi (32, 32, 3)	, 32, 3)				
(?, 32, 32, 3) 2018-10-04 00:18:06.742793: I te Your CPU supports instructions					
use: AVX2 FMA 2018-10-04 00:18:06.819645: I te cc:964] successful NUMA node rea	d from SysFS had	d negative value			
must be at least one NUMA node, 2018-10-04 00:18:06.820032: I te			/gpu_device.cc:1		
411] Found device 0 with propert name: GeForce GTX 980 major: 5 m		lockRate(GHz): 1.2	2785		
pciBusID: 0000:01:00.0 totalMemory: 3.94GiB freeMemory:	3.05GiB				
2018-10-04 00:18:06.870278: I te cc:964] successful NUMA node rea	nsorflow/stream_ d from SysFS had	d negative value			
must be at least one NUMA node, 2018-10-04 00:18:06.870668: I te	nsorflow/core/co		/gpu_device.cc:1		
411] Found device 1 with propert name: GeForce GTX 970 major: 5 m		lockRate(GHz): 1.	329		
pciBusID: 0000:02:00.0 totalMemory: 3.94GiB freeMemory:			, , ,		
2018-10-04 00:18:06.870818: I te 490] Adding visible gpu devices:	0, 1		31 –		
2018-10-04 00:18:07.225328: I te 71] Device interconnect StreamEx	ecutor with stre	ength 1 edge matr:	ix:		
2018-10-04 00:18:07.225360: I te 77] 0 1			-		
2018-10-04 00:18:07.225365: I te 90] 0: N Y	nsorflow/core/co	ommon_runtime/gpu	/gpu_device.cc:9		
2018-10-04 00:18:07.225368: I te 90] 1: Y N	nsorflow/core/co	ommon_runtime/gpu	/gpu_device.cc:9		
2018-10-04 00:18:07.225597: I te 103] Created TensorFlow device (h 2758 MB memory) -> physical GP	/job:localhost/r	replica:0/task:0/o	device:GPU:0 wit		
0000:01:00.0, compute capabilit 2018-10-04 00:18:07.247495: I te	y: 5.2) nsorflow/core/co	ommon_runtime/qpu	/gpu_device.cc:1		
103] Created TensorFlow device (h 3599 MB memory) -> physical GP	/job:localhost/r	replica:0/task:0/	device:GPU:1 wit		
0000:02:00.0, compute capabilit					
Layer (type)	Output Shape	Param #	Connected to		
input_1 (InputLayer)	(None, 32, 32, 3	3) 0			
conv2d_2 (Conv2D)	(None, 32, 32, 1	16) 448	input_1[0][0]		
batch_normalization_1 (BatchNor	(None, 32, 32, 1	16) 64	conv2d_2[0][0]		
activation_1 (Activation)	(None, 32, 32, 1	16) 0	batch_normaliza		
tion_1[0][0]		· · · ·			

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conv2d_3 (Conv2D) [0]	(None,				2320	activation_1[0]
batch_normalization_2 (BatchNor	(None,	32,	32,	16)	64	conv2d_3[0][0]
activation_2 (Activation) tion_2[0][0]	(None,	32,	32,	16)	0	batch_normaliza
conv2d_4 (Conv2D)	(None,	32,	32,	16)	2320	activation_2[0]
batch_normalization_3 (BatchNor	(None,	32,	32,	16)	64	conv2d_4[0][0]
add_1 (Add)	(None,	32,	32,	16)	0	conv2d_2[0][0]
tion_3[0][0]						batch_normaliza
activation_3 (Activation)	(None,	32,	32,	16)	0	add_1[0][0]
max_pooling2d_1 (MaxPooling2D) [0]	(None,	16,	16,	16)	0	activation_3[0]
conv2d_6 (Conv2D) [0][0]	(None,	16,	16,	32)	4640	max_pooling2d_1
batch_normalization_4 (BatchNor	(None,	16,	16,	32)	128	conv2d_6[0][0]
activation_4 (Activation) tion_4[0][0]	(None,	16,	16,	32)	0	batch_normaliza
conv2d_7 (Conv2D)	(None,	16,	16,	32)	9248	activation_4[0]
batch_normalization_5 (BatchNor	(None,	16,	16,	32)	128	conv2d_7[0][0]
activation_5 (Activation) tion_5[0][0]	(None,	16,	16,	32)	0	batch_normaliza
conv2d_8 (Conv2D)	(None,	16,	16,	32)	9248	activation_5[0]
batch_normalization_6 (BatchNor	(None,	16,	16,	32)	128	conv2d_8[0][0]
add_2 (Add)	(None,	16,	16,	32)	0	conv2d_6[0][0]
						batch_normaliza

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tion_6[0][0]		
activation_6 (Activation)	(None, 16, 16, 32) 0	add_2[0][0]
max_pooling2d_2 (MaxPooling2D) [0]	(None, 8, 8, 32) 0	activation_6[0]
conv2d_10 (Conv2D) [0][0]	(None, 8, 8, 64) 18	3496 max_pooling2d_2
batch_normalization_7 (BatchNor	(None, 8, 8, 64) 25	56 conv2d_10[0][0]
activation_7 (Activation) tion_7[0][0]	(None, 8, 8, 64) 0	batch_normaliza
conv2d_11 (Conv2D) [0]	(None, 8, 8, 64) 36	6928 activation_7[0]
batch_normalization_8 (BatchNor	(None, 8, 8, 64) 25	56 conv2d_11[0][0]
activation_8 (Activation) tion_8[0][0]	(None, 8, 8, 64) 0	batch_normaliza
conv2d_12 (Conv2D) [0]	(None, 8, 8, 64) 36	6928 activation_8[0]
batch_normalization_9 (BatchNor	(None, 8, 8, 64) 25	56 conv2d_12[0][0]
add_3 (Add)	(None, 8, 8, 64) 0	conv2d_10[0][0]
tion_9[0][0]		batch_normaliza
activation_9 (Activation)	(None, 8, 8, 64) 0	add_3[0][0]
<pre>average_pooling2d_1 (AveragePoo [0]</pre>	(None, 1, 1, 64) 0	activation_9[0]
flatten_1 (Flatten) 2d_1[0][0]	(None, 64) 0	average_pooling
dense_1 (Dense)	(None, 10) 65	50 flatten_1[0][0]
Total params: 122,570 Trainable params: 121,898 Non-trainable params: 672		

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Learning rate: 0.001			
Epoch 1/200			
Learning rate: 0.001 1250/1250 [====================================	1 _	16e 13me/etan - loss	1 4749 - 2001
0.4770 - val_loss: 1.3086 -		103 13M3/3cep 1033	. 1.4745 acc.
Epoch 2/200			
Learning rate: 0.001 1250/1250 [====================================		15s 12ms/step - loss	: 1.1434 - acc:
0.6102 - val_loss: 1.0706 -		•	
Epoch 3/200 Learning rate: 0.001			
1250/1250 [==========] -	15s 12ms/step - loss	: 1.0164 - acc:
0.6596 - val_loss: 1.0562 -	val_acc: 0.6459		
Epoch 4/200 Learning rate: 0.001			
1250/1250 [==========		15s 12ms/step - loss	: 0.9338 - acc:
0.6907 - val_loss: 0.8485 - Epoch 5/200	val_acc: 0.7305		
Learning rate: 0.001			
1250/1250 [====================================		15s 12ms/step - loss	: 0.8820 - acc:
0.7127 - val_loss: 0.8772 - Epoch 6/200	Val_acc: 0.7176		
Learning rate: 0.001		45 40 /	0.0070
1250/1250 [====================================		15s 12ms/step - Ioss	: 0.8378 - acc:
Epoch 7/200	Var_acc. 0.7130		
Learning rate: 0.001 1250/1250 [====================================	1	15g 12mg/gtop - logg	0 9055 - 2001
0.7442 - val_loss: 0.8680 -		158 12M8/Step - 1088	: 0.8055 - acc:
Epoch 8/200			
Learning rate: 0.001 1250/1250 [====================================	1 -	15s 12ms/sten - loss	· 0 7774 - acc·
0.7521 - val_loss: 0.8256 -		135 12.115, 8000 1088	. 0.7771 acc.
Epoch 9/200 Learning rate: 0.001			
1250/1250 [=========] -	15s 12ms/step - loss	: 0.7523 - acc:
0.7671 - val_loss: 0.7356 -	val_acc: 0.7768	_	
Epoch 10/200 Learning rate: 0.001			
1250/1250 [==========		15s 12ms/step - loss	: 0.7280 - acc:
0.7767 - val_loss: 0.8331 - Epoch 11/200	val_acc: 0.7533		
Learning rate: 0.001			
1250/1250 [====================================		15s 12ms/step - loss	: 0.7158 - acc:
0.7808 - val_loss: 0.7650 - Epoch 12/200	Val_acc: 0.7747		
Learning rate: 0.001	_		
1250/1250 [====================================		15s 12ms/step - Ioss	: 0.6966 - acc:
Epoch 13/200	Va1_acc. 0.7720		
Learning rate: 0.001	1	15	0 6004
1250/1250 [====================================		158 12M8/Step - 1088	: 0.6694 - acc:
Epoch 14/200			
Learning rate: 0.001 1250/1250 [====================================	1 -	15s 12ms/step - loss	0.6781 - acc:
0.7982 - val_loss: 0.7375 -		100 1Emo, 200p 1000	. 0.0701 4001
Epoch 15/200 Learning rate: 0.001			
1250/1250 [==========		16s 13ms/step - loss	: 0.6620 - acc:
0.8024 - val_loss: 0.7805 -			
Epoch 16/200 Learning rate: 0.001			
1250/1250 [==========		15s 12ms/step - loss	: 0.6542 - acc:
0.8081 - val_loss: 0.7039 -	val_acc: 0.7909		
Epoch 17/200 Learning rate: 0.001			
1250/1250 [==========		15s 12ms/step - loss	: 0.6421 - acc:

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0.8110 - val_loss: 0.7433			
Epoch 18/200			
Learning rate: 0.001 1250/1250 [====================================	=======================================	15s 12ms/step - loss	: 0.6307 - acc:
0.8163 - val_loss: 0.7693			
Epoch 19/200			
Learning rate: 0.001 1250/1250 [====================================	======1 -	15s 12ms/sten - loss	· 0 6282 - acc·
0.8185 - val_loss: 0.7840		100 12110,000 1000	. 0.0202 acc.
Epoch 20/200			
Learning rate: 0.001 1250/1250 [====================================	1 _	15e 12me/etan - loss	. 0 6202 - acc.
0.8204 - val_loss: 0.6991			. 0.0202 acc.
Epoch 21/200			
Learning rate: 0.001 1250/1250 [====================================	1 _	1/s 12ms/stop = loss	. 0 6152 - 2001
0.8237 - val_loss: 0.6725		145 12m3/3cep 1033	. 0.0132 acc.
Epoch 22/200			
Learning rate: 0.001 1250/1250 [====================================	1 _	14c 12mc/cton - loca	. 0 6072 - 2001
0.8258 - val_loss: 0.8384			. 0.00/2 - acc:
Epoch 23/200			
Learning rate: 0.001	1 _	150 12mg/gton - logg	. 0 5022 - 2001
1250/1250 [====================================		100 12mb/step - 10ss	. 0.3332 - acc:
Epoch 24/200			
Learning rate: 0.001	1	150 12mg/stan 1000	. 0 5070
1250/1250 [====================================		138 12ms/step - 10ss	: 0.5976 - acc:
Epoch 25/200			
Learning rate: 0.001	1	15- 10/ 1	0 5060
1250/1250 [====================================		15s 12ms/step - 10ss	: 0.5868 - acc:
Epoch 26/200	.u1_u00. 0.0103		
Learning rate: 0.001	1	15 10 / 1	0.5040
1250/1250 [====================================			: 0.5848 - acc:
Epoch 27/200	V41_400. 0.7013		
Learning rate: 0.001	1	16 10 / 1	0 5706
1250/1250 [====================================		16s 12ms/step - loss	: 0.5/96 - acc:
Epoch 28/200	Va1_acc. 0.0020		
Learning rate: 0.001	1	15- 10/ 1	. 0 5747
1250/1250 [====================================		15s 12ms/step - loss	: 0.5/4/ - acc:
Epoch 29/200	.41_400. 0.7550		
Learning rate: 0.001	,	15- 10/	0.5000
1250/1250 [====================================		is izms/step - loss	: U.5698 - acc:
Epoch 30/200	.41_400. 0.7000		
Learning rate: 0.001	,	15- 10/	0 5601
1250/1250 [====================================		15s 12ms/step - loss	: U.5621 - acc:
Epoch 31/200	var_acc. 0.01/J		
Learning rate: 0.001	_	45 40 /	0.5604
1250/1250 [====================================			: 0.5601 - acc:
Epoch 32/200	var_acc. 0.010/		
Learning rate: 0.001			
1250/1250 [====================================		15s 12ms/step - loss	: 0.5561 - acc:
Epoch 33/200	vai_acc: 0.0020		
Learning rate: 0.001			
1250/1250 [====================================		16s 12ms/step - loss	: 0.5502 - acc:
0.8501 - val_loss: 0.7155 Epoch 34/200	- val_acc: 0.8052		
Learning rate: 0.001			
1250/1250 [====================================		15s 12ms/step - loss	: 0.5483 - acc:
0.8521 - val_loss: 0.8579	- val_acc: U.//UZ		

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Epoch 35/200	
Learning rate: 0.001	0.5466
1250/1250 [====================================	: 0.5466 - acc:
Epoch 36/200	
Learning rate: 0.001	
1250/1250 [============] - 15s 12ms/step - loss	: 0.5387 - acc:
0.8551 - val_loss: 0.6485 - val_acc: 0.8285	
Epoch 37/200 Learning rate: 0.001	
1250/1250 [====================================	: 0.5387 - acc:
0.8536 - val_loss: 0.7839 - val_acc: 0.7875	
Epoch 38/200	
Learning rate: 0.001 1250/1250 [====================================	: 0.5335 - acc:
0.8571 - val_loss: 0.8836 - val_acc: 0.7732	
Epoch 39/200	
Learning rate: 0.001	. 0 5214
1250/1250 [====================================	: 0.5514 - acc:
Epoch 40/200	
Learning rate: 0.001	
1250/1250 [====================================	: 0.5283 - acc:
0.8605 - val_loss: 0.6620 - val_acc: 0.8289 Epoch 41/200	
Learning rate: 0.001	
1250/1250 [===========] - 15s 12ms/step - loss	: 0.5231 - acc:
0.8616 - val_loss: 0.7453 - val_acc: 0.8005	
Epoch 42/200 Learning rate: 0.001	
1250/1250 [====================================	: 0.5235 - acc:
0.8616 - val_loss: 0.7081 - val_acc: 0.8084	
Epoch 43/200	
Learning rate: 0.001 1250/1250 [====================================	: 0.5187 - acc:
0.8619 - val_loss: 0.6772 - val_acc: 0.8221	
Epoch 44/200	
Learning rate: 0.001 1250/1250 [====================================	· 0 5217 - acc:
0.8623 - val_loss: 0.7082 - val_acc: 0.8125	. 0.5217 acc.
Epoch 45/200	
Learning rate: 0.001	. 0 F130
1250/1250 [====================================	: 0.5139 - acc:
Epoch 46/200	
Learning rate: 0.001	
1250/1250 [====================================	: 0.5194 - acc:
0.8636 - val_loss: 0.6772 - val_acc: 0.8148 Epoch 47/200	
Learning rate: 0.001	
1250/1250 [===========] - 15s 12ms/step - loss	: 0.5143 - acc:
0.8644 - val_loss: 0.6992 - val_acc: 0.8144 Epoch 48/200	
Learning rate: 0.001	
1250/1250 [============] - 15s 12ms/step - loss	: 0.5114 - acc:
0.8666 - val_loss: 0.7683 - val_acc: 0.8022	
Epoch 49/200 Learning rate: 0.001	
1250/1250 [====================================	: 0.5106 - acc:
0.8669 - val_loss: 0.6363 - val_acc: 0.8359	
Epoch 50/200	
Learning rate: 0.001 1250/1250 [====================================	: 0.5093 - acc:
0.8668 - val_loss: 0.6366 - val_acc: 0.8331	. 0.3033 acc.
Epoch 51/200	
Learning rate: 0.001	. 0 5007
1250/1250 [====================================	: U.5UU/ - acc:
Epoch 52/200	
[*	

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Learning rate: 0.001			
1250/1250 [========			0.5039 - acc:
0.8703 - val_loss: 0.7143	- val_acc: 0.8152		
Epoch 53/200 Learning rate: 0.001			
1250/1250 [========	1 -	15s 12ms/step - loss:	0.4998 - acc:
0.8717 - val loss: 0.6902			0.1330 400.
Epoch 54/200			
Learning rate: 0.001			
1250/1250 [====================================			0.4977 - acc:
0.8729 - val_loss: 0.7263 Epoch 55/200	- val_acc: 0.8140		
Learning rate: 0.001			
1250/1250 [=======	1 -	15s 12ms/step - loss:	0.4977 - acc:
0.8721 - val_loss: 0.7570	- val_acc: 0.8141	-	
Epoch 56/200			
Learning rate: 0.001	1	15 10 / 1	0 4000
1250/1250 [====================================			0.4923 - acc:
Epoch 57/200	- Val_acc: 0.8332		
Learning rate: 0.001			
1250/1250 [========			0.4971 - acc:
0.8732 - val_loss: 0.7372	- val_acc: 0.8139		
Epoch 58/200			
Learning rate: 0.001 1250/1250 [====================================	1 _	15c 12mc/stop = loss:	0 4905 - 2001
0.8756 - val_loss: 0.7509			0.4905 - acc:
Epoch 59/200	va1_acc. 0.0103		
Learning rate: 0.001			
1250/1250 [=======			0.4858 - acc:
0.8786 - val_loss: 0.7023	- val_acc: 0.8199		
Epoch 60/200 Learning rate: 0.001			
1250/1250 [========	======1 -	15s 12ms/sten - loss:	0 4890 - acc:
0.8757 - val_loss: 0.6721			0.4000 acc.
Epoch 61/200	_		
Learning rate: 0.001			
1250/1250 [=========			0.4882 - acc:
0.8761 - val_loss: 0.5843 Epoch 62/200	- val_acc: 0.8533		
Learning rate: 0.0001			
1250/1250 [========] -	15s 12ms/step - loss:	0.3992 - acc:
0.9085 - val_loss: 0.5102	- val_acc: 0.8722	_	
Epoch 63/200			
Learning rate: 0.0001		15a 12ma/at 3	0 2704
1250/1250 [====================================			U.3/84 - acc:
Epoch 64/200	vai_acc: 0.0/30		
Learning rate: 0.0001			
1250/1250 [=======			0.3634 - acc:
0.9191 - val_loss: 0.5328	- val_acc: 0.8691		
Epoch 65/200			
Learning rate: 0.0001 1250/1250 [====================================	1	15c 12mc/c+cn = 1ccc	0 3610 - 300
0.9205 - val_loss: 0.5261			0.3010 - acc:
Epoch 66/200	.41_456. 0.0700		
Learning rate: 0.0001			
1250/1250 [=======] -	15s 12ms/step - loss:	0.3548 - acc:
0.9205 - val_loss: 0.5163	- val_acc: 0.8740		
Epoch 67/200 Learning rate: 0.0001			
1250/1250 [=========	1 _	15s 12ms/sten - loss.	0.3488 - acc
0.9239 - val_loss: 0.5103			5.5100 acc.
Epoch 68/200			
Learning rate: 0.0001			
1250/1250 [=========			0.3443 - acc:
0.9259 - val_loss: 0.5043	- val_acc: 0.8739		
Epoch 69/200 Learning rate: 0.0001			

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1250/1250 [========	1 _	15s 12ms/sten - loss:	0 3443 - acc:
0.9259 - val_loss: 0.5044		133 12.1137 3000 1000.	0.5115 466.
Epoch 70/200			
Learning rate: 0.0001			
1250/1250 [=========	======] -	15s 12ms/step - loss:	0.3347 - acc:
0.9274 - val_loss: 0.5024	- val_acc: 0.8771		
Epoch 71/200 Learning rate: 0.0001			
1250/1250 [==========	1 -	15s 12ms/step = loss:	0.3345 - acc:
0.9262 - val_loss: 0.5101			
Epoch 72/200			
Learning rate: 0.0001			
1250/1250 [====================================		15s 12ms/step - loss:	0.3302 - acc:
0.9284 - val_loss: 0.5065 Epoch 73/200	- Val_acc: 0.8/61		
Learning rate: 0.0001			
1250/1250 [========		15s 12ms/step - loss:	0.3292 - acc:
0.9273 - val_loss: 0.5135		-	
Epoch 74/200			
Learning rate: 0.0001	=	15 10 / : -	0 2040
1250/1250 [====================================		15s 12ms/step - loss:	U.3242 - acc:
0.9311 - val_loss: 0.4954 Epoch 75/200	- vai_acc: 0.8/68		
Learning rate: 0.0001			
1250/1250 [=========] -	15s 12ms/step - loss:	0.3227 - acc:
0.9300 - val_loss: 0.5004		-	
Epoch 76/200			
Learning rate: 0.0001		15 10 / 1	0 2100
1250/1250 [====================================		15s 12ms/step - loss:	0.3180 - acc:
Epoch 77/200	- Vai_acc: 0.8773		
Learning rate: 0.0001			
1250/1250 [=========] -	15s 12ms/step - loss:	0.3156 - acc:
0.9315 - val_loss: 0.5106	- val_acc: 0.8766		
Epoch 78/200			
Learning rate: 0.0001 1250/1250 [====================================		15a 12ma/atan lasa.	0 2120
0.9319 - val_loss: 0.5015		138 12M8/Step - 1088:	0.3130 - acc:
Epoch 79/200	var_acc: 0:0703		
Learning rate: 0.0001			
1250/1250 [========		15s 12ms/step - loss:	0.3111 - acc:
0.9318 - val_loss: 0.5123	- val_acc: 0.8766		
Epoch 80/200 Learning rate: 0.0001			
1250/1250 [=========	=======================================	15s 12ms/sten - loss:	0 3098 - acc:
0.9336 - val_loss: 0.4992			
Epoch 81/200			
Learning rate: 0.0001			
1250/1250 [====================================		15s 12ms/step - loss:	0.3051 - acc:
0.9335 - val_loss: 0.4970	- val_acc: 0.8804		
Epoch 82/200 Learning rate: 0.0001			
1250/1250 [=========	=======================================	15s 12ms/step - loss:	0.3106 - acc:
0.9320 - val_loss: 0.5063			
Epoch 83/200			
Learning rate: 0.0001			
1250/1250 [==========] -	15s 12ms/step - loss:	0.3029 - acc:
0.9349 - val_loss: 0.5012	- val_acc: 0.8770		
Epoch 84/200 Learning rate: 0.0001			
1250/1250 [=========	=======================================	14s 12ms/step - loss.	0.3009 - acc
0.9348 - val_loss: 0.5256			400.
Epoch 85/200			
Learning rate: 0.0001			
1250/1250 [=========		15s 12ms/step - loss:	0.3018 - acc:
0.9337 - val_loss: 0.5115	- val_acc: 0.8757		
Epoch 86/200 Learning rate: 0.0001			
1250/1250 [=========	1 _	15s 12ms/sten - loss.	0.2989 - acc.
1 =====================================]	100 12mo, ocep 1088.	0.2505 400.

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0.9350 - val_loss: 0.507			•
Epoch 87/200			
Learning rate: 0.0001 1250/1250 [====================================	=======1 -	14s 12ms/step - loss	: 0.2940 - acc:
0.9375 - val_loss: 0.490		110 12.007 0000 1000	. 0.2310 acc.
Epoch 88/200			
Learning rate: 0.0001 1250/1250 [====================================	1 _	19c 15mc/ctop = locc	. 0 2961 - 2001
0.9354 - val_loss: 0.513	4 - val acc: 0.8752	198 13MS/SCEP - 10SS	: 0.2901 - acc:
Epoch 89/200			
Learning rate: 0.0001	1	15- 10/	. 0 2000
1250/1250 [====================================		15s 12ms/step - loss	: 0.2908 - acc:
Epoch 90/200	0 Val_acc: 0:0701		
Learning rate: 0.0001			
1250/1250 [====================================	=======] - 2 - v::1 200: 0 9776	15s 12ms/step - loss	: 0.2939 - acc:
Epoch 91/200	2 - Vai_acc: 0.8776		
Learning rate: 0.0001			
1250/1250 [====================================		15s 12ms/step - loss	: 0.2889 - acc:
0.9382 - val_loss: 0.507 Epoch 92/200	1 - val_acc: 0.8/52		
Learning rate: 0.0001			
1250/1250 [=======		15s 12ms/step - loss	: 0.2880 - acc:
0.9369 - val_loss: 0.506 Epoch 93/200	1 - val_acc: 0.8758		
Learning rate: 0.0001			
1250/1250 [========		15s 12ms/step - loss	: 0.2888 - acc:
0.9365 - val_loss: 0.487	0 - val_acc: 0.8803		
Epoch 94/200 Learning rate: 0.0001			
1250/1250 [========] -	15s 12ms/step - loss	: 0.2854 - acc:
0.9376 - val_loss: 0.506	2 - val_acc: 0.8750		
Epoch 95/200 Learning rate: 0.0001			
1250/1250 [========	1 -	15s 12ms/step - loss	: 0.2847 - acc:
0.9374 - val_loss: 0.505		.,	
Epoch 96/200			
Learning rate: 0.0001 1250/1250 [====================================		15s 12ms/step - loss	: 0.2814 - acc:
0.9395 - val_loss: 0.495	6 - val_acc: 0.8777	100 120, 000p 1000	. 0.2011 400.
Epoch 97/200			
Learning rate: 0.0001 1250/1250 [====================================	======1 -	15s 12ms/sten - loss	· 0 2792 - acc
0.9395 - val_loss: 0.502		133 12.1137 3000 1033	. 0.2752 acc.
Epoch 98/200			
Learning rate: 0.0001 1250/1250 [====================================	1	15e 12me/eton - 1000	. 0 2774 - 300:
0.9393 - val_loss: 0.507		100 17mg/steb - 1088	. 0.2//4 - acc:
Epoch 99/200			
Learning rate: 0.0001		1Fa 12ma/a+ 7	. 0 2701
1250/1250 [====================================		138 12ms/step - 10ss	: U.Z/81 - acc:
Epoch 100/200	0.0/2/		
Learning rate: 0.0001		45 40 ()	
1250/1250 [====================================	2 - val acc: 0 8777	15s 12ms/step - loss	: 0.2760 - acc:
Epoch 101/200	2 Val_aCC: 0.0///		
Learning rate: 0.0001			
1250/1250 [========		15s 12ms/step - loss	: 0.2778 - acc:
0.9397 - val_loss: 0.481 Epoch 102/200	4 - val_acc: 0.8788		
Learning rate: 1e-05			
1250/1250 [========		15s 12ms/step - loss	: 0.2628 - acc:
0.9464 - val_loss: 0.490	1 - val_acc: 0.8790		
Epoch 103/200 Learning rate: 1e-05			
1250/1250 [========	======] -	15s 12ms/step - loss	: 0.2611 - acc:
0.9454 - val_loss: 0.487			
L			

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Epoch 104/200			·
Learning rate: 1e-05	_		
1250/1250 [====================================		15s 12ms/step - loss:	0.2596 - acc:
0.9456 - val_loss: 0.4890 - Epoch 105/200	- vai_acc: 0.8810		
Learning rate: 1e-05			
1250/1250 [=========		15s 12ms/step - loss:	0.2613 - acc:
0.9464 - val_loss: 0.4845 -			
Epoch 106/200			
Learning rate: 1e-05	1	15 10 /	0 0505
1250/1250 [====================================		15s 12ms/step - loss:	0.2595 - acc:
Epoch 107/200	- Val_acc: 0.0024		
Learning rate: 1e-05			
1250/1250 [==========		15s 12ms/step - loss:	0.2596 - acc:
0.9467 - val_loss: 0.4880 -	- val_acc: 0.8803		
Epoch 108/200			
Learning rate: 1e-05 1250/1250 [====================================	1	140 1200/0400 1000	0 2600
0.9454 - val_loss: 0.4862 -		145 12ms/step - 1055:	0.2000 - acc:
Epoch 109/200	.41_400. 0.0010		
Learning rate: 1e-05			
1250/1250 [==========		14s 12ms/step - loss:	0.2572 - acc:
0.9474 - val_loss: 0.4834 -	- val_acc: 0.8824		
Epoch 110/200			
Learning rate: 1e-05 1250/1250 [====================================	1 -	14e 12me/eten - loss:	0 2594 - acc:
0.9462 - val_loss: 0.4843 -		143 12m3/3cep 1033.	0.2374 acc.
Epoch 111/200			
Learning rate: 1e-05			
1250/1250 [=========		15s 12ms/step - loss:	0.2578 - acc:
0.9461 - val_loss: 0.4851 -	- val_acc: 0.8813		
Epoch 112/200 Learning rate: 1e-05			
1250/1250 [==========	=======================================	14s 12ms/step - loss:	0.2566 - acc:
0.9466 - val_loss: 0.4827 -			
Epoch 113/200			
Learning rate: 1e-05	,	44 40 /	0.0565
1250/1250 [====================================		14s 12ms/step - loss:	0.256/ - acc:
Epoch 114/200	- vai_acc: 0.0010		
Learning rate: 1e-05			
1250/1250 [==========] -	14s 12ms/step - loss:	0.2570 - acc:
0.9470 - val_loss: 0.4905 -	- val_acc: 0.8815		
Epoch 115/200			
Learning rate: 1e-05 1250/1250 [====================================	1	1/s 12ms/ston = 1000	0 2540 - 222
0.9486 - val_loss: 0.4808 -		140 12m3/3cep - 1088:	0.2340 - acc:
Epoch 116/200			
Learning rate: 1e-05			
1250/1250 [==========		15s 12ms/step - loss:	0.2565 - acc:
0.9475 - val_loss: 0.4838 -	- val_acc: 0.8822		
Epoch 117/200 Learning rate: 1e-05			
1250/1250 [==========	1 -	15s 12ms/step - loss:	0.2536 - acc:
0.9479 - val_loss: 0.4825 -		,	
Epoch 118/200	_		
Learning rate: 1e-05	_	45 40 47	0.0540
1250/1250 [====================================		15s 12ms/step - loss:	U.2548 - acc:
0.9476 - val_loss: 0.4851 - Epoch 119/200	- vai_acc: 0.8821		
Learning rate: 1e-05			
1250/1250 [==========] -	15s 12ms/step - loss:	0.2565 - acc:
0.9459 - val_loss: 0.4874 -		_	
Epoch 120/200			
Learning rate: 1e-05	,	15- 10/-/	0 0550
1250/1250 [====================================		<pre>10s 12ms/step - loss:</pre>	U.2553 - acc:
Epoch 121/200	vai_acc: 0.0013		
1 4			

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Learning rate: 1e-05		
1250/1250 [====================================		0.2545 - acc:
0.9490 - val_loss: 0.4856 - val_acc: 0 Epoch 122/200	.8831	
Learning rate: 1e-06		
1250/1250 [====================================		0.2525 - acc:
0.9484 - val_loss: 0.4854 - val_acc: 0 Epoch 123/200	.8821	
Learning rate: 1e-06		
1250/1250 [====================================		0.2559 - acc:
0.9474 - val_loss: 0.4860 - val_acc: 0	.8817	
Epoch 124/200 Learning rate: 1e-06		
1250/1250 [====================================		0.2537 - acc:
0.9487 - val_loss: 0.4848 - val_acc: 0	.8820	
Epoch 125/200 Learning rate: 1e-06		
1250/1250 [====================================	==] - 15s 12ms/step - loss:	0.2496 - acc:
0.9505 - val_loss: 0.4835 - val_acc: 0	.8825	
Epoch 126/200 Learning rate: 1e-06		
1250/1250 [====================================	==1 - 15s 12ms/step - loss:	0.2512 - acc:
0.9496 - val_loss: 0.4829 - val_acc: 0		
Epoch 127/200		
Learning rate: 1e-06 1250/1250 [====================================	==1 - 15s 12ms/step - loss:	0.2540 - acc:
0.9476 - val_loss: 0.4844 - val_acc: 0		0.2310 acc.
Epoch 128/200		
Learning rate: 1e-06 1250/1250 [====================================	1 - 15c 12mc/ctop - locci	0.2550 - 200
0.9481 - val_loss: 0.4836 - val_acc: 0		0.2330 - acc:
Epoch 129/200		
Learning rate: 1e-06	1 15- 10/	0.0501
1250/1250 [====================================		0.2531 - acc:
Epoch 130/200	.0023	
Learning rate: 1e-06		
1250/1250 [====================================		0.2491 - acc:
Epoch 131/200	.0031	
Learning rate: 1e-06		
1250/1250 [====================================		0.2537 - acc:
Epoch 132/200	.0031	
Learning rate: 1e-06		
1250/1250 [====================================		0.2544 - acc:
0.9479 - val_loss: 0.4866 - val_acc: 0 Epoch 133/200	.8819	
Learning rate: 1e-06		
1250/1250 [====================================		0.2532 - acc:
0.9480 - val_loss: 0.4846 - val_acc: 0 Epoch 134/200	.8824	
Learning rate: 1e-06		
1250/1250 [====================================		0.2529 - acc:
0.9486 - val_loss: 0.4832 - val_acc: 0	.8838	
Epoch 135/200 Learning rate: 1e-06		
1250/1250 [====================================	==] - 15s 12ms/step - loss:	0.2505 - acc:
0.9489 - val_loss: 0.4866 - val_acc: 0	.8822	
Epoch 136/200 Learning rate: 1e-06		
1250/1250 [====================================	==] - 15s 12ms/step - loss:	0.2537 - acc:
0.9477 - val_loss: 0.4864 - val_acc: 0		
Epoch 137/200		
Learning rate: 1e-06 1250/1250 [====================================	==1 - 15s 12ms/sten - loss.	0.2525 - acc
0.9485 - val_loss: 0.4859 - val_acc: 0		0.2323 acc:
Epoch 138/200		
Learning rate: 1e-06		
	· · · · · · · · · · · · · · · · · · ·	

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1250/1250 [===========	======1 -	15s 12ms/step - loss:	0.2545 - acc:
0.9476 - val_loss: 0.4841 - v		.,	
Epoch 139/200			
Learning rate: 1e-06	1	15- 10/ 1	0 0510
1250/1250 [====================================		15s 12ms/step - 10ss:	0.2512 - acc:
Epoch 140/200	a1_acc. 0.0024		
Learning rate: 1e-06			
1250/1250 [==========		15s 12ms/step - loss:	0.2525 - acc:
0.9482 - val_loss: 0.4861 - v	al_acc: 0.8828		
Epoch 141/200 Learning rate: 1e-06			
1250/1250 [===========	======] -	15s 12ms/step - loss:	0.2531 - acc:
0.9470 - val_loss: 0.4830 - v			
Epoch 142/200			
Learning rate: 1e-06	1	15 12mg/ston loss.	0 2522
1250/1250 [====================================		158 12M8/Step - 1088:	0.2323 - acc:
Epoch 143/200	a1_acc. 0.0050		
Learning rate: 1e-06			
1250/1250 [============		15s 12ms/step - loss:	0.2530 - acc:
0.9491 - val_loss: 0.4840 - v	al_acc: 0.8833		
Epoch 144/200 Learning rate: 1e-06			
1250/1250 [==========	======] -	15s 12ms/step - loss:	0.2531 - acc:
0.9482 - val_loss: 0.4843 - v		.,	
Epoch 145/200			
Learning rate: 1e-06	1	15- 10/ 1	0 0511
1250/1250 [====================================		15s 12ms/step - 10ss:	0.2511 - acc:
Epoch 146/200	a1_acc. 0.0034		
Learning rate: 1e-06			
1250/1250 [==========		14s 12ms/step - loss:	0.2518 - acc:
0.9482 - val_loss: 0.4844 - v	al_acc: 0.8841		
Epoch 147/200 Learning rate: 1e-06			
1250/1250 [==========	======] -	15s 12ms/step - loss:	0.2499 - acc:
0.9495 - val_loss: 0.4847 - v	al_acc: 0.8829	-	
Epoch 148/200			
Learning rate: 1e-06 1250/1250 [====================================	1 _	15c 12mc/cton = locc:	0 2527 - 2001
0.9491 - val_loss: 0.4851 - val_		138 12ms/scep 1038.	0.2327 acc.
Epoch 149/200			
Learning rate: 1e-06			
1250/1250 [====================================		15s 12ms/step - loss:	0.2533 - acc:
0.9476 - val_loss: 0.4841 - val_Epoch 150/200	a1_a00; U.8838		
Learning rate: 1e-06			
1250/1250 [===========		15s 12ms/step - loss:	0.2530 - acc:
0.9494 - val_loss: 0.4843 - v	al_acc: 0.8839		
Epoch 151/200			
Learning rate: 1e-06 1250/1250 [====================================	======1 -	15s 12ms/sten - loss.	0.2539 - acc
0.9487 - val_loss: 0.4837 - val_		100 12mg/ Scep 1055.	0.2333 acc.
Epoch 152/200			
Learning rate: 5e-07			
1250/1250 [====================================		15s 12ms/step - loss:	0.2513 - acc:
0.949/ - val_loss: 0.4840 - val_toss: 0.4840 - val_toss	a1_aCC: U.8843		
Learning rate: 5e-07			
1250/1250 [==========] -	15s 12ms/step - loss:	0.2524 - acc:
0.9478 - val_loss: 0.4849 - v	al_acc: 0.8837	-	
Epoch 154/200			
Learning rate: 5e-07	1	15e 12me/eton - 1000:	0 2539 - 200:
0.9473 - val_loss: 0.4859 - val_loss:		139 12ms/sceb - 1088:	0.2339 - acc:
Epoch 155/200	uucc. 0.0052		
Learning rate: 5e-07			
1250/1250 [============	======] -	15s 12ms/step - loss:	0.2531 - acc:

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0.9483 - val_loss: 0.4			<u> </u>
Epoch 156/200	_		
Learning rate: 5e-07	1	15a 12ma/atan 1aa	a. 0 2524 aaa.
1250/1250 [====================================			s: 0.2524 - acc:
Epoch 157/200	001 Val_acc. 0.0000		
Learning rate: 5e-07			
1250/1250 [========			s: 0.2533 - acc:
0.9485 - val_loss: 0.4 Epoch 158/200	852 - val_acc: 0.8837		
Learning rate: 5e-07			
1250/1250 [=======	======] -	15s 12ms/step - los	s: 0.2519 - acc:
0.9492 - val_loss: 0.4	832 - val_acc: 0.8840		
Epoch 159/200 Learning rate: 5e-07			
1250/1250 [========		15s 12ms/step = los	s: 0.2537 - acc:
0.9474 - val_loss: 0.4	840 - val_acc: 0.8839	100 12.110, 500p 100	J. 0.2007 4001
Epoch 160/200			
Learning rate: 5e-07	,	15 10 / 1	0.0405
1250/1250 [====================================			s: 0.2485 - acc:
Epoch 161/200	044 Vai_acc: 0:0041		
Learning rate: 5e-07			
1250/1250 [======		14s 12ms/step - los	s: 0.2545 - acc:
0.9474 - val_loss: 0.4	842 - val_acc: 0.8832		
Epoch 162/200 Learning rate: 5e-07			
1250/1250 [=======		15s 12ms/step - los	s: 0.2537 - acc:
0.9484 - val_loss: 0.4			
Epoch 163/200			
Learning rate: 5e-07		14a 12ma/atan - laa	0. 0 2512 - 2001
1250/1250 [====================================			s: 0.2313 - acc:
Epoch 164/200	010 Val_a00. 0.000.		
Learning rate: 5e-07			
1250/1250 [=========			s: 0.2538 - acc:
0.9471 - val_loss: 0.4 Epoch 165/200	667 - Val_acc: 0.6630		
Learning rate: 5e-07			
1250/1250 [=======] -		s: 0.2528 - acc:
0.9481 - val_loss: 0.4	822 - val_acc: 0.8843		
Epoch 166/200 Learning rate: 5e-07			
1250/1250 [========	1 -	14s 12ms/step - los	s: 0.2497 - acc:
0.9499 - val_loss: 0.4			
Epoch 167/200			
Learning rate: 5e-07 1250/1250 [====================================	1	15c 12mc/aton - 1ca	s. 0 2550 - 335:
0.9479 - val_loss: 0.4			3. 0.2330 - acc:
Epoch 168/200			
Learning rate: 5e-07		44 40 /	0.0504
1250/1250 [====================================			s: 0.2531 - acc:
0.9480 - val_loss: 0.4 Epoch 169/200	042 - Val_aCC: U.8834		
Learning rate: 5e-07			
1250/1250 [========	=====] -	15s 12ms/step - los	s: 0.2520 - acc:
0.9484 - val_loss: 0.4	841 - val_acc: 0.8835		
Epoch 170/200			
Learning rate: 5e-07 1250/1250 [====================================	=======1 -	15s 12ms/step - los	s: 0.2521 - acc.
0.9481 - val_loss: 0.4			
Epoch 171/200			
Learning rate: 5e-07	_	15 10 / : -	0.0510
1250/1250 [====================================			s: 0.2512 - acc:
0.9494 - val_loss: 0.4 Epoch 172/200	0-10 - Val_aCC: 0.683/		
Learning rate: 5e-07			
1250/1250 [=======			s: 0.2531 - acc:
0.9481 - val_loss: 0.4	850 - val_acc: 0.8835		

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Epoch 173/200			
Learning rate: 5e-07	1	15- 10/ 1	0.0400
1250/1250 [====================================			: U.Z498 - acc:
Epoch 174/200	vai_acc: 0:0054		
Learning rate: 5e-07			
1250/1250 [=======			: 0.2493 - acc:
0.9497 - val_loss: 0.484	4 - val_acc: 0.8833		
Epoch 175/200 Learning rate: 5e-07			
1250/1250 [========		15s 12ms/step - loss	: 0.2502 - acc:
0.9487 - val_loss: 0.485			
Epoch 176/200			
Learning rate: 5e-07	1	15a 12ma/atam 1aas	. 0 2524
1250/1250 [====================================			: 0.2524 - acc:
Epoch 177/200	var_acc. 0.0029		
Learning rate: 5e-07			
1250/1250 [=======			: 0.2542 - acc:
0.9471 - val_loss: 0.482	5 - val_acc: 0.8841		
Epoch 178/200 Learning rate: 5e-07			
1250/1250 [=========	1 -	15s 12ms/step - loss	: 0.2510 - acc:
0.9492 - val_loss: 0.485			
Epoch 179/200			
Learning rate: 5e-07	-		0.0504
1250/1250 [==========			: 0.2501 - acc:
0.9487 - val_loss: 0.484 Epoch 180/200	3 - Val_acc: 0.8639		
Learning rate: 5e-07			
1250/1250 [========] -	15s 12ms/step - loss	: 0.2516 - acc:
0.9479 - val_loss: 0.482	6 - val_acc: 0.8838		
Epoch 181/200			
Learning rate: 5e-07 1250/1250 [=========	1 -	14e 12me/eten - loss	· 0 2510 - acc·
0.9493 - val_loss: 0.483			. 0.2310 acc.
Epoch 182/200			
Learning rate: 5e-07			
1250/1250 [=========			: 0.2527 - acc:
0.9480 - val_loss: 0.483 Epoch 183/200	4 - Val_acc: 0.8636		
Learning rate: 5e-07			
1250/1250 [========] -	15s 12ms/step - loss	: 0.2526 - acc:
0.9473 - val_loss: 0.484	6 - val_acc: 0.8836		
Epoch 184/200			
Learning rate: 5e-07 1250/1250 [=========	.======1 -	15s 12ms/step - loss	: 0.2517 - acc:
0.9487 - val_loss: 0.485			
Epoch 185/200			
Learning rate: 5e-07	=	15 10 / : -	0.0515
1250/1250 [====================================			: 0.2515 - acc:
0.9473 - val_loss: 0.485 Epoch 186/200	o va⊥_acc: 0.6833		
Learning rate: 5e-07			
1250/1250 [=======			: 0.2527 - acc:
0.9488 - val_loss: 0.482	7 - val_acc: 0.8846		
Epoch 187/200			
Learning rate: 5e-07 1250/1250 [=========	:======1 -	15s 12ms/sten - loss	: 0.2542 - acc
0.9489 - val_loss: 0.483			. 0.2542 acc:
Epoch 188/200			
Learning rate: 5e-07			
1250/1250 [========			: 0.2510 - acc:
0.9494 - val_loss: 0.483	U - val_acc: 0.8834		
Epoch 189/200 Learning rate: 5e-07			
1250/1250 [=========		14s 12ms/step - loss	: 0.2538 - acc:
0.9484 - val_loss: 0.484			
Epoch 190/200			

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Learning rate: 5e-07 1250/1250 [========] - 15s 12ms/step - loss: 0.9487 - val_loss: 0.4836 - val_acc: 0.8836	0.2496 - acc:
Epoch 191/200 Learning rate: 5e-07 1250/1250 [===========] - 15s 12ms/step - loss: 0.9500 - val_loss: 0.4843 - val_acc: 0.8836	0.2496 - acc:
Epoch 192/200 Learning rate: 5e-07 1250/1250 [====================================	0.2521 - acc:
Epoch 193/200 Learning rate: 5e-07 1250/1250 [====================================	0.2526 - acc:
Epoch 194/200 Learning rate: 5e-07 1250/1250 [====================================	0.2504 - acc:
0.9491 - val_loss: 0.4828 - val_acc: 0.8843 Epoch 195/200 Learning rate: 5e-07 1250/1250 [====================================	0.2496 - acc:
0.9490 - val_loss: 0.4835 - val_acc: 0.8841 Epoch 196/200 Learning rate: 5e-07 1250/1250 [====================================	
0.9486 - val_loss: 0.4830 - val_acc: 0.8841 Epoch 197/200 Learning rate: 5e-07	
1250/1250 [====================================	0.2524 - acc:
1250/1250 [==========] - 15s 12ms/step - loss: 0.9492 - val_loss: 0.4836 - val_acc: 0.8839 Epoch 199/200 Learning rate: 5e-07	0.2489 - acc:
1250/1250 [=======] - 15s 12ms/step - loss: 0.9485 - val_loss: 0.4855 - val_acc: 0.8829 Epoch 200/200	0.2506 - acc:
Learning rate: 5e-07 1250/1250 [====================================	0.2501 - acc:
Test loss: 0.5143441814422608 Test accuracy: 0.8784	