Image Classification

Modelli di Keras

MobileNet

Guess T1	2676	Model Size	16 MB	
Guess T5	3480			
Total	3923			
TOP 1	68.21%	Expected TOP 1	70.40%	-2.19%
TOP 5	88.71%	Expected TOP 5	89.50%	-0.79%

Inception V3

Guess T1	2983	Model Size	92 MB	
Guess T5	3643			
Total	3923			
TOP 1	76.04%	Expected TOP 1	77.90%	-1.86%
TOP 5	92.86%	Expected TOP 5	93.70%	-0.84%

ResNet152 V2

Guess T1	2699	Model Size	232 MB	
Guess T5	3496			
Total	3923			
TOP 1	68.80%	Expected TOP 1	78.00%	-9.20%
TOP 5	89.12%	Expected TOP 5	94.21%	-5.09%

ResNet50 V2

Guess T1	2567	Model Size	98 MB	
Guess T5	3422			
Total	3923			
TOP 1	65.43%	Expected TOP 1	76.01%	-10.58%
TOP 5	87.23%	Expected TOP 5	92.82%	-5.59%

Modelli di PyTorch

MobileNetV2

Guess T1	2657	Model Size	14 MB	
Guess T5	3487			
Total	3923			
TOP 1	67.73%	Expected TOP 1	71.88%	-4.15%
TOP 5	88.89%	Expected TOP 5	90.27%	-1.38%

Inception V3

Guess T1	2978	Model Size	104 MB	
Guess T5	3646			
Total	3923			
TOP 1	75.91%	Expected TOP 1	77.29%	-1.38%
TOP 5	92.94%	Expected TOP 5	93.45%	-0.51%

ResNet152

Guess T1	2950	Model Size	231 MB	
Guess T5	3656			
Total	3923			
TOP 1	75.20%	Expected TOP 1	78.31%	-3.11%
TOP 5	93.19%	Expected TOP 5	94.05%	-0.85%

AlexNet

Guess T1	2073	Model Size	234 MB	
Guess T5	3024			
Total	3923			
TOP 1	52.84%	Expected TOP 1	56.52%	-3.68%
TOP 5	77.08%	Expected TOP 5	79.07%	-1.98%

Keras VS PyTorch

Normal *	GrayScale
0.48%	
-0.18%	

Normal	GrayScale
0.13%	
-0.08%	

Normal *	GrayScale
-6.40%	
-4.08%	

ResNet50

Guess T1	2661	**Model Size**	98 MB		
Guess T5	3466				
Total	3923				
TOP 1	67.83%	**Expected TOP 1**	74.90%	-7.07%	
TOP 5	88.35%	**Expected TOP 5**	91.20%	-2.85%	

ResNet50

					Normal	GrayScale
Guess T1	2853	**Model Size**	98 MB			
Guess T5	3608					
Total	3923					
TOP 1	72.72%	**Expected TOP 1**	76.13%	-3.41%	-4.89%	
TOP 5	91.97%	**Expected TOP 5**	92.86%	-0.89%	-3.62%	

VGG16

Guess T1	2502	**Model Size**	528 MB		
Guess T5	3369				
Total	3923				
TOP 1	63.78%	**Expected TOP 1**	71.30%	-7.52%	
TOP 5	85.88%	**Expected TOP 5**	90.01%	-4.13%	

VGG16

					Normal	GrayScale
Guess T1	2663	**Model Size**	528 MB			
Guess T5	3500					
Total	3923					
TOP 1	67.88%	**Expected TOP 1**	71.59%	-3.71%	-4.10%	
TOP 5	89.22%	**Expected TOP 5**	90.38%	-1.16%	-3.34%	

VGG19

Guess T1	2516	**Model Size**	549 MB		
Guess T5	3365				
Total	3923				
TOP 1	64.13%	**Expected TOP 1**	71.30%	-7.17%	
TOP 5	85.78%	**Expected TOP 5**	90.00%	-4.22%	

VGG19

					Normal	GrayScale
Guess T1	2723	**Model Size**	549 MB			
Guess T5	3502					
Total	3923					
TOP 1	69.41%	**Expected TOP 1**	72.38%	-2.96%	-5.28%	
TOP 5	89.27%	**Expected TOP 5**	90.88%	-1.61%	-3.49%	

SqueezeNet 1.1

Guess T1	2040	**Model Size**	5 MB		
Guess T5	3026				
Total	3923				
TOP 1	52.00%	**Expected TOP 1**	58.18%	-6.18%	
TOP 5	77.13%	**Expected TOP 5**	80.62%	-3.49%	

VGG19 BN

Guess T1	2773	**Model Size**	549 MB		
Guess T5	3581				
Total	3923				
TOP 1	70.69%	**Expected TOP 1**	74.22%	-3.53%	
TOP 5	91.28%	**Expected TOP 5**	91.84%	-0.56%	

MX Resnet152

Guess T1	2844	Classification T	< 6s
Guess T5	3596	Model Size	215 MB
Total	3923	Resources	Medium
TOP 1	72.50%	Expected TOP 1	77.42%
TOP 5	91.66%	Expected TOP 5	94.21%

GrayScale

Guess T1		2610	-234
Guess T5		3451	-145
Total		3923	0
TOP 1		66.53%	-5.96%
TOP 5		87.97%	-3.70%

VCC19 BN

Guess T1	30	Classification T	~ 10s
Guess T5	106	Model Size	507 MB
Total	3923	Resources	High
TOP 1	0.76%	Expected TOP 1	73.83%
TOP 5	2.70%	Expected TOP 5	91.79%

Tiny YOLO

Correct Guesses	12964
Total Images	17125
Detection Time	~ 1s
Model Size	60MB
Precision	75.70%

YOLO V2

Correct Guesses	6119
Total Images	6432
Detection Time	~ 6s
Model Size	200MB
Precision	95.13%