

## 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	2809	Model Size	14 MB	
Guess T5	3524			
Total	3923			
TOP 1	71.60%	Expected TOP 1	71.88%	-0.27%
TOP 5	89.83%	Expected TOP 5	90.27%	-0.44%

Inception V3				
Guess T1	3015	Model Size	104 MB	
Guess T5	3651			
Total	3923			
TOP 1	76.85%	Expected TOP 1	77.29%	-0.44%
TOP 5	93.07%	Expected TOP 5	93.45%	-0.38%

ResNet152				
Guess T1	3001	Model Size	231 MB	
Guess T5	3678			
Total	3923			
TOP 1	76.50%	Expected TOP 1	78.31%	-1.81%
TOP 5	93.75%	Expected TOP 5	94.05%	-0.29%

AlexNet				
Guess T1	2209	Model Size	234 MB	
Guess T5	3099			
Total	3923			
TOP 1	56.31%	Expected TOP 1	56.52%	-0.21%
TOP 5	79.00%	Expected TOP 5	79.07%	-0.07%

## Keras VS PyTorch

Diff *	Winner
-3.39%	PyTorch
-1.12%	PyTorch

Diff	Winner
-0.82%	PyTorch
-0.20%	PyTorch

Diff *	Winner
-7.70%	PyTorch
-4.64%	PyTorch

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%

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%

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%

ResNet50				
Guess T1	2970	Model Size	98 MB	
Guess T5	3650			
Total	3923			
TOP 1	75.71%	Expected TOP 1	76.13%	-0.42%
TOP 5	93.04%	Expected TOP 5	92.86%	0.18%

VGG16				
Guess T1	2762	Model Size	528 MB	
Guess T5	3547			
Total	3923			
TOP 1	70.41%	Expected TOP 1	71.59%	-1.19%
TOP 5	90.42%	Expected TOP 5	90.38%	0.03%

VGG19				
Guess T1	2802	Model Size	549 MB	
Guess T5	3553			
Total	3923			
TOP 1	71.42%	Expected TOP 1	72.38%	-0.95%
TOP 5	90.57%	Expected TOP 5	90.88%	-0.31%

SqueezeNet 1.1				
Guess T1	2286	Model Size	5 MB	
Guess T5	3173			
Total	3923			
TOP 1	58.27%	Expected TOP 1	58.18%	0.09%
TOP 5	80.88%	Expected TOP 5	80.62%	0.26%

VGG19 BN				
Guess T1	2877	Model Size	549 MB	
Guess T5	3599			
Total	3923			
TOP 1	73.34%	Expected TOP 1	74.22%	-0.88%
TOP 5	91.74%	Expected TOP 5	91.84%	-0.10%

Diff	Winner
-7.88%	PyTorch
-4.69%	PyTorch

Diff	Winner
-6.63%	PyTorch
-4.54%	PyTorch

Diff	Winner
-7.29%	PyTorch
-4.79%	PyTorch

Modelli di Keras

MobileNet				
Guess T1	696	Model Size	16 MB	
Guess T5	877			
Total	1000			
TOP 1	69.60%	Expected TOP 1	70.40%	-0.80%
TOP 5	87.70%	Expected TOP 5	89.50%	-1.80%

Inception V3				
Guess T1	754	Model Size	92 MB	
Guess T5	926			
Total	1000			
TOP 1	75.40%	Expected TOP 1	77.90%	-2.50%
TOP 5	92.60%	Expected TOP 5	93.70%	-1.10%

ResNet152 V2				
Guess T1	690	Model Size	232 MB	
Guess T5	885			
Total	1000			
TOP 1	69.00%	Expected TOP 1	78.00%	-9.00%
TOP 5	88.50%	Expected TOP 5	94.21%	-5.71%

ResNet50 V2				
Guess T1	651	Model Size	98 MB	
Guess T5	866			
Total	1000			
TOP 1	65.10%	Expected TOP 1	76.01%	-10.91%
TOP 5	86.60%	Expected TOP 5	92.82%	-6.22%

Modelli di PyTorch

MobileNetV2				
Guess T1	711	Model Size	14 MB	
Guess T5	909			
Total	1000			
TOP 1	71.10%	Expected TOP 1	71.88%	-0.78%
TOP 5	90.90%	Expected TOP 5	90.27%	0.63%

Inception V3				
Guess T1	781	Model Size	104 MB	
Guess T5	939			
Total	1000			
TOP 1	78.10%	Expected TOP 1	77.29%	0.81%
TOP 5	93.90%	Expected TOP 5	93.45%	0.45%

ResNet152				
Guess T1	774	Model Size	231 MB	
Guess T5	947			
Total	1000			
TOP 1	77.40%	Expected TOP 1	78.31%	-0.91%
TOP 5	94.70%	Expected TOP 5	94.05%	0.65%

AlexNet				
Guess T1	577	Model Size	234 MB	
Guess T5	802			
Total	1000			
TOP 1	57.70%	Expected TOP 1	56.52%	1.18%
TOP 5	80.20%	Expected TOP 5	79.07%	1.13%

Keras VS PyTorch

Diff *	Winner
-1.50%	PyTorch
-3.20%	PyTorch

Diff	Winner
-2.70%	PyTorch
-1.30%	PyTorch

Diff *	Winner
-8.40%	PyTorch
-6.20%	PyTorch

ResNet50				
Guess T1	694	Model Size	98 MB	
Guess T5	897			
Total	1000			
TOP 1	69.40%	Expected TOP 1	74.90%	-5.50%
TOP 5	89.70%	Expected TOP 5	91.20%	-1.50%

VGG16				
Guess T1	631	Model Size	528 MB	
Guess T5	856			
Total	1000			
TOP 1	63.10%	Expected TOP 1	71.30%	-8.20%
TOP 5	85.60%	Expected TOP 5	90.01%	-4.41%

VGG19				
Guess T1	649	Model Size	549 MB	
Guess T5	862			
Total	1000			
TOP 1	64.90%	Expected TOP 1	71.30%	-6.40%
TOP 5	86.20%	Expected TOP 5	90.00%	-3.80%

ResNet50				
Guess T1	763	Model Size	98 MB	
Guess T5	934			
Total	1000			
TOP 1	76.30%	Expected TOP 1	76.13%	0.17%
TOP 5	93.40%	Expected TOP 5	92.86%	0.54%

VGG16				
Guess T1	722	Model Size	528 MB	
Guess T5	910			
Total	1000			
TOP 1	72.20%	Expected TOP 1	71.59%	0.61%
TOP 5	91.00%	Expected TOP 5	90.38%	0.62%

VGG19				
Guess T1	730	Model Size	549 MB	
Guess T5	908			
Total	1000			
TOP 1	73.00%	Expected TOP 1	72.38%	0.62%
TOP 5	90.80%	Expected TOP 5	90.88%	-0.08%

SqueezeNet 1.1				
Guess T1	612	Model Size	5 MB	
Guess T5	817			
Total	1000			
TOP 1	61.20%	Expected TOP 1	58.18%	3.02%
TOP 5	81.70%	Expected TOP 5	80.62%	1.08%

VGG19 BN				
Guess T1	746	Model Size	549 MB	
Guess T5	927			
Total	1000			
TOP 1	74.60%	Expected TOP 1	74.22%	0.38%
TOP 5	92.70%	Expected TOP 5	91.84%	0.86%

Diff	Winner
-6.90%	PyTorch
-3.70%	PyTorch

Diff	Winner
-9.10%	PyTorch
-5.40%	PyTorch

Diff	Winner
-8.10%	PyTorch
-4.60%	PyTorch

ImageNetMini		A-Line	
TOP 1 AVG	TOP 5 AVG	TOP 1 AVG	TOP 5 AVG
-10.61%	-7.43%	-12.18%	-8.78%

MobileNet

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2676		2284	Guess T1
Guess T5	3480		3220	Guess T5
Total	3923		3923	Total
TOP 1	68.21%	-9.99%	58.22%	TOP 1
TOP 5	88.71%	-6.63%	82.08%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	696		586	Guess T1
Guess T5	877		797	Guess T5
Total	1000		1000	Total
TOP 1	69.60%	-11.00%	58.60%	TOP 1
TOP 5	87.70%	-8.00%	79.70%	TOP 5

Inception V3

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2983		2702	Guess T1
Guess T5	3643		3486	Guess T5
Total	3923		3923	Total
TOP 1	76.04%	-7.16%	68.88%	TOP 1
TOP 5	92.86%	-4.00%	88.86%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	754		680	Guess T1
Guess T5	926		883	Guess T5
Total	1000		1000	Total
TOP 1	75.40%	-7.40%	68.00%	TOP 1
TOP 5	92.60%	-4.30%	88.30%	TOP 5

ResNet50

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2661		2116	Guess T1
Guess T5	3466		3089	Guess T5
Total	3923		3923	Total
TOP 1	67.83%	-13.89%	53.94%	TOP 1
TOP 5	88.35%	-9.61%	78.74%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	694		532	Guess T1
Guess T5	897		770	Guess T5
Total	1000		1000	Total
TOP 1	69.40%	-16.20%	53.20%	TOP 1
TOP 5	89.70%	-12.70%	77.00%	TOP 5

## ResNet152 V2

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2699		2369	Guess T1
Guess T5	3496		3264	Guess T5
Total	3923		3923	Total
TOP 1	68.80%	-8.41%	60.39%	TOP 1
TOP 5	89.12%	-5.91%	83.20%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	690		589	Guess T1
Guess T5	885		822	Guess T5
Total	1000		1000	Total
TOP 1	69.00%	-10.10%	58.90%	TOP 1
TOP 5	88.50%	-6.30%	82.20%	TOP 5

## VGG19

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2516		1982	Guess T1
Guess T5	3365		2934	Guess T5
Total	3923		3923	Total
TOP 1	64.13%	-13.61%	50.52%	TOP 1
TOP 5	85.78%	-10.99%	74.79%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	649		487	Guess T1
Guess T5	862		736	Guess T5
Total	1000		1000	Total
TOP 1	64.90%	-16.20%	48.70%	TOP 1
TOP 5	86.20%	-12.60%	73.60%	TOP 5

ImageNet Mini	
TOP 1 AVG	TOP 5 AVG
-13.58%	-9.37%

A-Line	
TOP 1 AVG	TOP 5 AVG
-14.60%	-9.99%

## MobileNetV2

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2809		2319	Guess T1
Guess T5	3524		3240	Guess T5
Total	3923		3923	Total
TOP 1	71.60%	-12.49%	59.11%	TOP 1
TOP 5	89.83%	-7.24%	82.59%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	711		588	Guess T1
Guess T5	909		828	Guess T5
Total	1000		1000	Total
TOP 1	71.10%	-12.30%	58.80%	TOP 1
TOP 5	90.90%	-8.10%	82.80%	TOP 5

## Inception V3

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	3015		2757	Guess T1
Guess T5	3651		3509	Guess T5
Total	3923		3923	Total
TOP 1	76.85%	-6.58%	70.28%	TOP 1
TOP 5	93.07%	-3.62%	89.45%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	781		693	Guess T1
Guess T5	939		903	Guess T5
Total	1000		1000	Total
TOP 1	78.10%	-8.80%	69.30%	TOP 1
TOP 5	93.90%	-3.60%	90.30%	TOP 5

## ResNet152

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	3001		2682	Guess T1
Guess T5	3678		3517	Guess T5
Total	3923		3923	Total
TOP 1	76.50%	-8.13%	68.37%	TOP 1
TOP 5	93.75%	-4.10%	89.65%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	774		673	Guess T1
Guess T5	947		888	Guess T5
Total	1000		1000	Total
TOP 1	77.40%	-10.10%	67.30%	TOP 1
TOP 5	94.70%	-5.90%	88.80%	TOP 5

## AlexNet

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2209		1383	Guess T1
Guess T5	3099		2315	Guess T5
Total	3923		3923	Total
TOP 1	56.31%	-21.06%	35.25%	TOP 1
TOP 5	79.00%	-19.98%	59.01%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	577		349	Guess T1
Guess T5	802		564	Guess T5
Total	1000		1000	Total
TOP 1	57.70%	-22.80%	34.90%	TOP 1
TOP 5	80.20%	-23.80%	56.40%	TOP 5

## ResNet50

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2970		2525	Guess T1
Guess T5	3650		3419	Guess T5
Total	3923		3923	Total
TOP 1	75.71%	-11.34%	64.36%	TOP 1
TOP 5	93.04%	-5.89%	87.15%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	763		644	Guess T1
Guess T5	934		863	Guess T5
Total	1000		1000	Total
TOP 1	76.30%	-11.90%	64.40%	TOP 1
TOP 5	93.40%	-7.10%	86.30%	TOP 5

## VGG16

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2762		2288	Guess T1
Guess T5	3547		3233	Guess T5
Total	3923		3923	Total
TOP 1	70.41%	-12.08%	58.32%	TOP 1
TOP 5	90.42%	-8.00%	82.41%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	722		552	Guess T1
Guess T5	910		812	Guess T5
Total	1000		1000	Total
TOP 1	72.20%	-17.00%	55.20%	TOP 1
TOP 5	91.00%	-9.80%	81.20%	TOP 5

## VGG19

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2802		2365	Guess T1
Guess T5	3553		3263	Guess T5
Total	3923		3923	Total
TOP 1	71.42%	-11.14%	60.29%	TOP 1
TOP 5	90.57%	-7.39%	83.18%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	730		564	Guess T1
Guess T5	908		821	Guess T5
Total	1000		1000	Total
TOP 1	73.00%	-16.60%	56.40%	TOP 1
TOP 5	90.80%	-8.70%	82.10%	TOP 5



SqueezeNet 1.1

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2809		1630	Guess T1
Guess T5	3524		2620	Guess T5
Total	3923		3923	Total
TOP 1	71.60%	-30.05%	41.55%	TOP 1
TOP 5	89.83%	-23.04%	66.79%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	612		406	Guess T1
Guess T5	817		658	Guess T5
Total	1000		1000	Total
TOP 1	61.20%	-20.60%	40.60%	TOP 1
TOP 5	81.70%	-15.90%	65.80%	TOP 5

VGG19 BN

ImageNet Mini				
Normal		Vs	GrayScale	
Guess T1	2877		2512	Guess T1
Guess T5	3599		3399	Guess T5
Total	3923		3923	Total
TOP 1	73.34%	-9.30%	64.03%	TOP 1
TOP 5	91.74%	-5.10%	86.64%	TOP 5

A-Line				
Normal		Vs	GrayScale	
Guess T1	746		633	Guess T1
Guess T5	927		857	Guess T5
Total	1000		1000	Total
TOP 1	74.60%	-11.30%	63.30%	TOP 1
TOP 5	92.70%	-7.00%	85.70%	TOP 5

MobileNet						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	696	603	600	617	611	618
Guess T5	877	842	840	837	831	838
Total	1000	1000	1000	1000	1000	1000
TOP 1	69.60%	60.30%	60.00%	61.70%	61.10%	61.80%
TOP 5	87.70%	84.20%	84.00%	83.70%	83.10%	83.80%
Diff TOP 1		-9.30%	-9.60%	-7.90%	-8.50%	-7.80%
Diff TOP 5		-3.50%	-3.70%	-4.00%	-4.60%	-3.90%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	696	602	618	607	617	606
Guess T5	877	830	839	839	824	835
Total	1000	1000	1000	1000	1000	1000
TOP 1	69.60%	60.20%	61.80%	60.70%	61.70%	60.60%
TOP 5	87.70%	83.00%	83.90%	83.90%	82.40%	83.50%
Diff TOP 1		-9.40%	-7.80%	-8.90%	-7.90%	-9.00%
Diff TOP 5		-4.70%	-3.80%	-3.80%	-5.30%	-4.20%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG	TOP 5 AVG
-8.61%	-4.15%

InceptionV3						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	754	708	701	711	702	689
Guess T5	926	899	899	903	904	908
Total	1000	1000	1000	1000	1000	1000
TOP 1	75.40%	70.80%	70.10%	71.10%	70.20%	68.90%
TOP 5	92.60%	89.90%	89.90%	90.30%	90.40%	90.80%
Diff TOP 1		-4.60%	-5.30%	-4.30%	-5.20%	-6.50%
Diff TOP 5		-2.70%	-2.70%	-2.30%	-2.20%	-1.80%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	754	712	705	700	701	709
Guess T5	926	905	902	898	907	895
Total	1000	1000	1000	1000	1000	1000
TOP 1	75.40%	71.20%	70.50%	70.00%	70.10%	70.90%
TOP 5	92.60%	90.50%	90.20%	89.80%	90.70%	89.50%
Diff TOP 1		-4.20%	-4.90%	-5.40%	-5.30%	-4.50%
Diff TOP 5		-2.10%	-2.40%	-2.80%	-1.90%	-3.10%

TOP 1 AVG	TOP 5 AVG
-5.02%	-2.40%

ResNet152 V2						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	690	611	614	601	607	612
Guess T5	885	824	837	840	828	825
Total	1000	1000	1000	1000	1000	1000
TOP 1	69.00%	61.10%	61.40%	60.10%	60.70%	61.20%
TOP 5	88.50%	82.40%	83.70%	84.00%	82.80%	82.50%
Diff TOP 1		-7.90%	-7.60%	-8.90%	-8.30%	-7.80%
Diff TOP 5		-6.10%	-4.80%	-4.50%	-5.70%	-6.00%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	690	608	606	604	613	617
Guess T5	885	837	841	833	837	827
Total	1000	1000	1000	1000	1000	1000
TOP 1	69.00%	60.80%	60.60%	60.40%	61.30%	61.70%
TOP 5	88.50%	83.70%	84.10%	83.30%	83.70%	82.70%
Diff TOP 1		-8.20%	-8.40%	-8.60%	-7.70%	-7.30%
Diff TOP 5		-4.80%	-4.40%	-5.20%	-4.80%	-5.80%

ResNet50 V2						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	651	568	576	575	569	576
Guess T5	866	805	807	798	799	807
Total	1000	1000	1000	1000	1000	1000
TOP 1	65.10%	56.80%	57.60%	57.50%	56.90%	57.60%
TOP 5	86.60%	80.50%	80.70%	79.80%	79.90%	80.70%
Diff TOP 1		-8.30%	-7.50%	-7.60%	-8.20%	-7.50%
Diff TOP 5		-6.10%	-5.90%	-6.80%	-6.70%	-5.90%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	651	578	558	570	571	578
Guess T5	866	802	795	808	805	795
Total	1000	1000	1000	1000	1000	1000
TOP 1	65.10%	57.80%	55.80%	57.00%	57.10%	57.80%
TOP 5	86.60%	80.20%	79.50%	80.80%	80.50%	79.50%
Diff TOP 1		-7.30%	-9.30%	-8.10%	-8.00%	-7.30%
Diff TOP 5		-6.40%	-7.10%	-5.80%	-6.10%	-7.10%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG TOP 5 AVG  
-8.07% -5.21%

TOP 1 AVG TOP 5 AVG  
-7.91% -6.39%

ResNet50						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	694	553	544	547	539	533
Guess T5	897	781	787	784	785	773
Total	1000	1000	1000	1000	1000	1000
TOP 1	69.40%	55.30%	54.40%	54.70%	53.90%	53.30%
TOP 5	89.70%	78.10%	78.70%	78.40%	78.50%	77.30%
Diff TOP 1		-14.10%	-15.00%	-14.70%	-15.50%	-16.10%
Diff TOP 5		-11.60%	-11.00%	-11.30%	-11.20%	-12.40%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	694	551	535	538	553	546
Guess T5	897	774	777	784	770	785
Total	1000	1000	1000	1000	1000	1000
TOP 1	69.40%	55.10%	53.50%	53.80%	55.30%	54.60%
TOP 5	89.70%	77.40%	77.70%	78.40%	77.00%	78.50%
Diff TOP 1		-14.30%	-15.90%	-15.60%	-14.10%	-14.80%
Diff TOP 5		-12.30%	-12.00%	-11.30%	-12.70%	-11.20%

TOP 1 AVG TOP 5 AVG  
-15.01% -11.70%

VGG16						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	631	517	527	528	523	522
Guess T5	856	758	767	753	767	753
Total	1000	1000	1000	1000	1000	1000
TOP 1	63.10%	51.70%	52.70%	52.80%	52.30%	52.20%
TOP 5	85.60%	75.80%	76.70%	75.30%	76.70%	75.30%
Diff TOP 1		-11.40%	-10.40%	-10.30%	-10.80%	-10.90%
Diff TOP 5		-9.80%	-8.90%	-10.30%	-8.90%	-10.30%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	631	520	522	527	523	512
Guess T5	856	768	767	759	763	754
Total	1000	1000	1000	1000	1000	1000
TOP 1	63.10%	52.00%	52.20%	52.70%	52.30%	51.20%
TOP 5	85.60%	76.80%	76.70%	75.90%	76.30%	75.40%
Diff TOP 1		-11.10%	-10.90%	-10.40%	-10.80%	-11.90%
Diff TOP 5		-8.80%	-8.90%	-9.70%	-9.30%	-10.20%

TOP 1 AVG TOP 5 AVG  
-10.89% -9.51%

		VGG19				
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	649	534	547	533	539	539
Guess T5	862	778	785	781	788	777
Total	1000	1000	1000	1000	1000	1000
TOP 1	64.90%	53.40%	54.70%	53.30%	53.90%	53.90%
TOP 5	86.20%	77.80%	78.50%	78.10%	78.80%	77.70%
Diff TOP 1		-11.50%	-10.20%	-11.60%	-11.00%	-11.00%
Diff TOP 5		-8.40%	-7.70%	-8.10%	-7.40%	-8.50%

  

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	649	533	528	533	534	537
Guess T5	862	777	781	773	787	776
Total	1000	1000	1000	1000	1000	1000
TOP 1	64.90%	53.30%	52.80%	53.30%	53.40%	53.70%
TOP 5	86.20%	77.70%	78.10%	77.30%	78.70%	77.60%
Diff TOP 1		-11.60%	-12.10%	-11.60%	-11.50%	-11.20%
Diff TOP 5		-8.50%	-8.10%	-8.90%	-7.50%	-8.60%

No Filters

Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234

Seed applicato alla generazione random dei filtri

Filtered

Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVGTOP 5 AVG

-11.33%-8.17%

MobileNet V2						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	711	584	603	604	592	617
Guess T5	909	845	836	836	847	846
Total	1000	1000	1000	1000	1000	1000
TOP 1	71.10%	58.40%	60.30%	60.40%	59.20%	61.70%
TOP 5	90.90%	84.50%	83.60%	83.60%	84.70%	84.60%
Diff TOP 1		-12.70%	-10.80%	-10.70%	-11.90%	-9.40%
Diff TOP 5		-6.40%	-7.30%	-7.30%	-6.20%	-6.30%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	711	619	605	598	598	594
Guess T5	909	846	837	837	843	834
Total	1000	1000	1000	1000	1000	1000
TOP 1	71.10%	61.90%	60.50%	59.80%	59.80%	59.40%
TOP 5	90.90%	84.60%	83.70%	83.70%	84.30%	83.40%
Diff TOP 1		-9.20%	-10.60%	-11.30%	-11.30%	-11.70%
Diff TOP 5		-6.30%	-7.20%	-7.20%	-6.60%	-7.50%

Inception V3						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	781	725	728	721	728	735
Guess T5	939	921	915	914	918	918
Total	1000	1000	1000	1000	1000	1000
TOP 1	78.10%	72.50%	72.80%	72.10%	72.80%	73.50%
TOP 5	93.90%	92.10%	91.50%	91.40%	91.80%	91.80%
Diff TOP 1		-5.60%	-5.30%	-6.00%	-5.30%	-4.60%
Diff TOP 5		-1.80%	-2.40%	-2.50%	-2.10%	-2.10%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	781	722	729	731	732	727
Guess T5	939	918	922	912	916	921
Total	1000	1000	1000	1000	1000	1000
TOP 1	78.10%	72.20%	72.90%	73.10%	73.20%	72.70%
TOP 5	93.90%	91.80%	92.20%	91.20%	91.60%	92.10%
Diff TOP 1		-5.90%	-5.20%	-5.00%	-4.90%	-5.40%
Diff TOP 5		-2.10%	-1.70%	-2.70%	-2.30%	-1.80%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG TOP 5 AVG  
-10.96% -6.83%

TOP 1 AVG TOP 5 AVG  
-5.32% -2.15%

ResNet152						
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	774	682	688	694	687	690
Guess T5	947	914	894	903	907	900
Total	1000	1000	1000	1000	1000	1000
TOP 1	77.40%	68.20%	68.80%	69.40%	68.70%	69.00%
TOP 5	94.70%	91.40%	89.40%	90.30%	90.70%	90.00%
Diff TOP 1		-9.20%	-8.60%	-8.00%	-8.70%	-8.40%
Diff TOP 5		-3.30%	-5.30%	-4.40%	-4.00%	-4.70%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	774	691	688	689	691	692
Guess T5	947	906	906	904	909	905
Total	1000	1000	1000	1000	1000	1000
TOP 1	77.40%	69.10%	68.80%	68.90%	69.10%	69.20%
TOP 5	94.70%	90.60%	90.60%	90.40%	90.90%	90.50%
Diff TOP 1		-8.30%	-8.60%	-8.50%	-8.30%	-8.20%
Diff TOP 5		-4.10%	-4.10%	-4.30%	-3.80%	-4.20%

Seeds		AlexNet				
		69	666	777	911	119
No Filters		Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	577	428	421	418	413	428
Guess T5	802	668	664	665	665	667
Total	1000	1000	1000	1000	1000	1000
TOP 1	57.70%	42.80%	42.10%	41.80%	41.30%	42.80%
TOP 5	80.20%	66.80%	66.40%	66.50%	66.50%	66.70%
Diff TOP 1		-14.90%	-15.60%	-15.90%	-16.40%	-14.90%
Diff TOP 5		-13.40%	-13.80%	-13.70%	-13.70%	-13.50%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	577	422	413	423	419	415
Guess T5	802	667	657	659	668	648
Total	1000	1000	1000	1000	1000	1000
TOP 1	57.70%	42.20%	41.30%	42.30%	41.90%	41.50%
TOP 5	80.20%	66.70%	65.70%	65.90%	66.80%	64.80%
Diff TOP 1		-15.50%	-16.40%	-15.40%	-15.80%	-16.20%
Diff TOP 5		-13.50%	-14.50%	-14.30%	-13.40%	-15.40%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG	TOP 5 AVG
-8.48%	-4.22%

TOP 1 AVG	TOP 5 AVG
-15.70%	-13.92%



		ResNet50				
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	763	665	663	667	669	662
Guess T5	934	885	870	880	880	878
Total	1000	1000	1000	1000	1000	1000
TOP 1	76.30%	66.50%	66.30%	66.70%	66.90%	66.20%
TOP 5	93.40%	88.50%	87.00%	88.00%	88.00%	87.80%
Diff TOP 1		-9.80%	-10.00%	-9.60%	-9.40%	-10.10%
Diff TOP 5		-4.90%	-6.40%	-5.40%	-5.40%	-5.60%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	763	658	673	663	661	667
Guess T5	934	883	882	887	880	884
Total	1000	1000	1000	1000	1000	1000
TOP 1	76.30%	65.80%	67.30%	66.30%	66.10%	66.70%
TOP 5	93.40%	88.30%	88.20%	88.70%	88.00%	88.40%
Diff TOP 1		-10.50%	-9.00%	-10.00%	-10.20%	-9.60%
Diff TOP 5		-5.10%	-5.20%	-4.70%	-5.40%	-5.00%

		VGG16				
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	722	606	610	617	622	617
Guess T5	910	846	845	843	848	845
Total	1000	1000	1000	1000	1000	1000
TOP 1	72.20%	60.60%	61.00%	61.70%	62.20%	61.70%
TOP 5	91.00%	84.60%	84.50%	84.30%	84.80%	84.50%
Diff TOP 1		-11.60%	-11.20%	-10.50%	-10.00%	-10.50%
Diff TOP 5		-6.40%	-6.50%	-6.70%	-6.20%	-6.50%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	722	615	608	615	609	602
Guess T5	910	841	838	849	846	845
Total	1000	1000	1000	1000	1000	1000
TOP 1	72.20%	61.50%	60.80%	61.50%	60.90%	60.20%
TOP 5	91.00%	84.10%	83.80%	84.90%	84.60%	84.50%
Diff TOP 1		-10.70%	-11.40%	-10.70%	-11.30%	-12.00%
Diff TOP 5		-6.90%	-7.20%	-6.10%	-6.40%	-6.50%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG	TOP 5 AVG
-9.82%	-5.31%

TOP 1 AVG	TOP 5 AVG
-10.99%	-6.54%



		VGG19				
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	730	621	618	630	618	631
Guess T5	908	874	850	862	850	850
Total	1000	1000	1000	1000	1000	1000
TOP 1	73.00%	62.10%	61.80%	63.00%	61.80%	63.10%
TOP 5	90.80%	87.40%	85.00%	86.20%	85.00%	85.00%
Diff TOP 1		-10.90%	-11.20%	-10.00%	-11.20%	-9.90%
Diff TOP 5		-3.40%	-5.80%	-4.60%	-5.80%	-5.80%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	730	633	628	639	629	620
Guess T5	908	857	853	854	866	854
Total	1000	1000	1000	1000	1000	1000
TOP 1	73.00%	63.30%	62.80%	63.90%	62.90%	62.00%
TOP 5	90.80%	85.70%	85.30%	85.40%	86.60%	85.40%
Diff TOP 1		-9.70%	-10.20%	-9.10%	-10.10%	-11.00%
Diff TOP 5		-5.10%	-5.50%	-5.40%	-4.20%	-5.40%

		SqueezeNet 1.1				
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	612	450	468	457	457	458
Guess T5	817	706	697	698	698	708
Total	1000	1000	1000	1000	1000	1000
TOP 1	61.20%	45.00%	46.80%	45.70%	45.70%	45.80%
TOP 5	81.70%	70.60%	69.70%	69.80%	69.80%	70.80%
Diff TOP 1		-16.20%	-14.40%	-15.50%	-15.50%	-15.40%
Diff TOP 5		-11.10%	-12.00%	-11.90%	-11.90%	-10.90%

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	612	459	447	443	459	463
Guess T5	817	703	701	712	709	695
Total	1000	1000	1000	1000	1000	1000
TOP 1	61.20%	45.90%	44.70%	44.30%	45.90%	46.30%
TOP 5	81.70%	70.30%	70.10%	71.20%	70.90%	69.50%
Diff TOP 1		-15.30%	-16.50%	-16.90%	-15.30%	-14.90%
Diff TOP 5		-11.40%	-11.60%	-10.50%	-10.80%	-12.20%

No Filters Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234 Seed applicato alla generazione random dei filtri

Filtered Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG	TOP 5 AVG
-10.33%	-5.10%

TOP 1 AVG	TOP 5 AVG
-15.59%	-11.43%

		VGG19 BN				
Seeds		69	666	777	911	119
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	746	667	666	655	658	657
Guess T5	927	886	882	881	880	878
Total	1000	1000	1000	1000	1000	1000
TOP 1	74.60%	66.70%	66.60%	65.50%	65.80%	65.70%
TOP 5	92.70%	88.60%	88.20%	88.10%	88.00%	87.80%
Diff TOP 1		-7.90%	-8.00%	-9.10%	-8.80%	-8.90%
Diff TOP 5		-4.10%	-4.50%	-4.60%	-4.70%	-4.90%

  

Seeds		420	1308	7	23	9
	No Filters	Filtered	Filtered	Filtered	Filtered	Filtered
Guess T1	746	664	665	659	670	650
Guess T5	927	873	887	885	886	878
Total	1000	1000	1000	1000	1000	1000
TOP 1	74.60%	66.40%	66.50%	65.90%	67.00%	65.00%
TOP 5	92.70%	87.30%	88.70%	88.50%	88.60%	87.80%
Diff TOP 1		-8.20%	-8.10%	-8.70%	-7.60%	-9.60%
Diff TOP 5		-5.40%	-4.00%	-4.20%	-4.10%	-4.90%

No Filters

Risultati ottenuti dai modelli con le immagini originali del dataset Aline

1234

Seed applicato alla generazione random dei filtri

Filtered

Risultati ottenuti dal testing dei modelli con le immagini del dataset Aline alterato dai filtri di Diego.

TOP 1 AVG

TOP 5 AVG

-8.49%

-4.54%

DeepUndeeper Aline Results

Dataset	Tot. Imgs	Pulite	Distorte	AVG Error	AVG Error %
Aline_Normal	1000	860	140	0.52	51.84%
Alina_119	1000	650	350	0.93	93.15%
Alina_1308	1000	663	337	0.93	93.44%
Alina_23	1000	620	380	0.96	95.82%
Alina_420	1000	645	355	0.92	92.16%
Alina_666	1000	635	365	0.97	96.51%
Alina_69	1000	659	341	0.94	93.57%
Alina_7	1000	611	389	1.02	101.59%
Alina_777	1000	653	347	0.94	94.19%
Alina_9	1000	670	330	0.94	93.61%
Alina_911	1000	640	360	0.93	93.29%

Dataset

Nome del dataset che e' stato passato al modello

Pulite

Immagini considerate non alterate (??)

AVG Error

Differenza tra immagine originale e immagine  
ottenuta dopo essere stata passata al modelo  
(pixel a pixel)

Distorte

Immagini considerate alterate (??)