Supplementary Material for:
Adaptive SVM+: Learning with Privileged Information for Domain Adaptation

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Inspired by the brilliant introduction of Razavian *et al*. [5], we present the intuition behind our proposed approach as a discussion between a student filled with questions and an intelligent teacher. We then provide complete results on the Animals with Attributes [2] and INTERACT [1] datasets.

1. A Discussion between an intelligent teacher and a student on Adaptive SVM+

Student: There are so many learning paradigms out there that work great for classification and recognition tasks. Why do we need to distill privileged information in their learning process?
Teacher: Learning frameworks that address visual recognition tasks have been indeed around for decades. However, the LUPI paradigm by Vapnik and Vashist [8] deviated from what was available until then. Instead of feeding the training process with tuples of features and labels it required as an input triplets comprising also privileged information. Today, more than ever, that data is everywhere, auxiliary information can help train better and more robust models that may exhibit a better generalization over unseen examples.
Student: And why do we need Adaptive SVM+? Why are existing methods [3, 9, 7, 4] not sufficient?
Teacher: First, there are not that many methods that employ privileged information for visual recognition. Most of the state of the art utilizes privileged information as information originating from a single source. For example, in domain adaptation we leverage the knowledge obtained in the source domain to a new target domain of different distribution and possibly largely unlabeled. In the LUPI paradigm [8], as it was initially introduced, we exploit additional features (*i.e*., $\boldsymbol{\mathcal{X}}^*$) to learn a better classifier. Adaptive SVM+ is the first method that aspires to combine both the knowledge distillation concept of domain adaptation and the addition of a privileged set of features in the training process.
Student: When should I use Adaptive SVM+?
Teacher: To make things easier let's assume that SVM-based methods are the only option at hand, although other classifiers such as Naive Bayes or decision trees are all valid options [10]. Depending on whether privileged information is available in the source and target domains, a break-down of different cases is depicted in Table 1.

Table 1. In a scenario in which SVM-based classifiers are the only option, we describe which method to use on the source and target domains depending on whether privileged information is available or not.

Is Privileged Information Available?		Which Method to Use?	
Source	Target	Source	Target
No	No	SVM	Adaptive SVM
Yes	No	SVM+	Adaptive SVM
No	Yes	SVM	**Adaptive SVM+**
Yes	Yes	SVM+	**Adaptive SVM+**

Student: But it is 2017 and great deep learning papers are popping up on arxiv one after the other. Why bother with SVM-based methods?
Teacher: The fact that there has been significant progress using deep learning in the past few years does not mean that traditional machine learning techniques should not still be developed and benchmarked. When a plethora of data is available, or when pre-trained deep learning models do exist, then it is almost certain that after setting up some baselines, a deep learning based technique is the way to go. However, in cases where datasets are small, and the nature/distribution of the data is completely different from the datasets that the available pre-trained models were trained on, then machine learning approaches that propose frameworks to utilize auxiliary knowledge can be very helpful. With that in mind, approaches which aspire to address such challenges [3, 9, 7, 4], as well as the proposed Adaptive SVM+, may be considered as a powerful additional machine learning tool in the hands of the researchers.

2. Complete Results on the AwA and INTERACT datasets

In Figure 1 we present the difference in the performance between the best method and the rest in terms of average

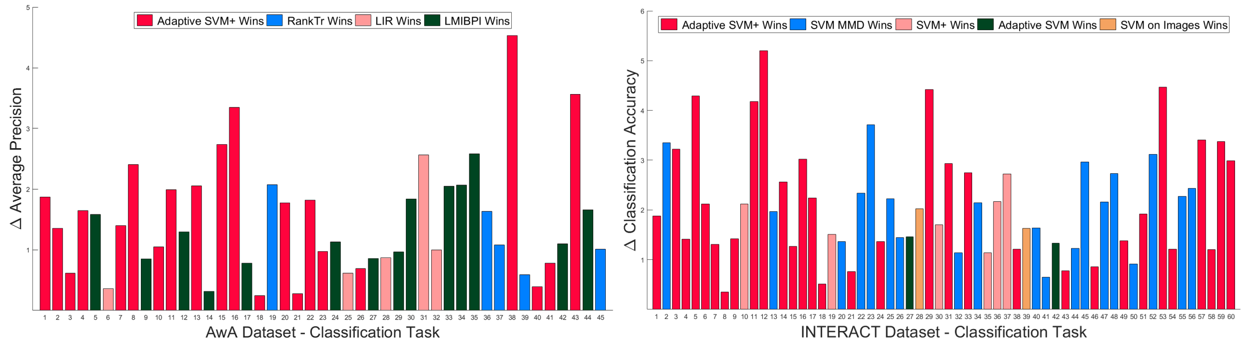

Figure 1. Differences between the performance of the winning method against the average accuracy over the rest of the available methods. The y-axis represents the difference in terms of AP on the AwA dataset (left) and classification accuracy (right). Each bar at the x-axis corresponds to the respective classification task.

precision and classification accuracy for the AwA and the INTERACT datasets respectively. In both cases, using the exact same features and evaluation protocol, our method achieves state-of-the-art results. For example in the AwA dataset, Adaptive SVM+ is better than the rest in 21 out of 45 tasks (Figure 1 - left), 13 of which are statistically significant over the second best method (z-test). For the rest of the methods, LMIBPI [4] achieved higher AP 15 times, RankTr [7] 5, and LIR [9] 4 times.

In Tables 2, 3 we provide complete results (along with statistical significance tests) of the performance of Adaptive SVM+ against the rest of the methods.

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Table 2. Complete mean AP and standard error results over 20 train/test splits on the Animals with Attributes dataset [2]. Similar to the rest of the methods, we used 50 and 200 samples per class for training and testing respectively along with a linear kernel. Results for an RBF kernel are not depicted, since Motiian *et al*. [4] demonstrated that switching to a non-linear kernel does not improve the performance. Results highlighted with light purple indicate statistically significant improvement over the second best method using the z-test.

	Animals	SVM	Adaptive SVM [10]	SVM+ [8]	RankTr [7]	LIR [9]	LMIBPI [4]	Adaptive SVM+
1	Chimpanzee versus Giant panda	87.69 ± 0.70	90.43 ± 0.48	89.49 ± 0.66	89.33 ± 0.50	88.28 ± 0.47	88.32 ± 0.33	$\mathbf{90.51 \pm 0.43}$
2	Chimpanzee versus Leopard	93.75 ± 0.16	92.15 ± 0.39	93.62 ± 0.28	93.70 ± 0.23	93.36 ± 0.15	94.05 ± 0.10	$\mathbf{95.06 \pm 0.25}$
3	Chimpanzee vs. Persian cat	89.98 ± 0.41	89.65 ± 0.40	90.78 ± 0.45	91.00 ± 0.39	91.59 ± 0.40	90.76 ± 0.19	$\mathbf{91.73 \pm 0.31}$
4	Chimpanzee vs. Pig	85.24 ± 0.54	85.24 ± 0.45	87.36 ± 0.38	86.08 ± 0.43	83.74 ± 0.35	87.32 ± 0.17	$\mathbf{87.36 \pm 0.41}$
5	Chimpanzee vs. Hippopotamus	86.51 ± 0.49	87.13 ± 0.46	87.42 ± 0.49	86.92 ± 0.45	89.63 ± 0.31	$\mathbf{90.21 \pm 0.12}$	89.34 ± 0.62
6	Chimpanzee vs. Humpback whale	97.85 ± 0.14	97.85 ± 0.31	97.98 ± 0.19	98.08 ± 0.18	$\mathbf{98.30 \pm 0.16}$	97.76 ± 0.26	97.98 ± 0.14
7	Chimpanzee vs. Raccoon	87.10 ± 0.32	84.59 ± 0.67	86.63 ± 0.34	87.07 ± 0.48	85.90 ± 0.63	88.21 ± 0.27	$\mathbf{88.46 \pm 0.47}$
8	Chimpanzee vs. Rat	84.75 ± 0.64	85.86 ± 0.40	85.31 ± 0.53	86.67 ± 0.56	85.43 ± 0.48	85.31 ± 0.29	$\mathbf{88.21 \pm 0.41}$
9	Chimpanzee vs. Seal	92.38 ± 0.29	89.88 ± 0.40	92.17 ± 0.34	91.54 ± 0.43	92.78 ± 0.42	$\mathbf{93.11 \pm 0.23}$	92.46 ± 0.29
10	Giant panda vs. Leopard	92.51 ± 0.29	94.42 ± 0.21	93.02 ± 0.38	93.76 ± 0.29	92.81 ± 0.48	92.95 ± 0.20	$\mathbf{94.22 \pm 0.40}$
11	Giant panda vs. Persian cat	93.03 ± 0.49	94.06 ± 0.40	93.20 ± 0.45	92.57 ± 0.43	93.75 ± 0.29	92.82 ± 0.32	$\mathbf{95.04 \pm 0.26}$
12	Giant panda vs. Pig	86.23 ± 0.46	86.23 ± 0.50	85.83 ± 0.34	86.22 ± 0.52	84.19 ± 0.69	$\mathbf{86.71 \pm 0.40}$	85.83 ± 0.46
13	Giant panda vs. Hippopotamus	89.58 ± 0.41	92.78 ± 0.36	89.23 ± 0.30	90.89 ± 0.36	91.27 ± 0.35	91.12 ± 0.29	$\mathbf{93.15 \pm 0.36}$
14	Giant panda vs. Humpback whale	98.72 ± 0.15	98.72 ± 0.18	98.31 ± 0.19	98.53 ± 0.15	98.67 ± 0.11	$\mathbf{98.82 \pm 0.14}$	98.31 ± 0.23
15	Giant panda vs. Raccoon	87.66 ± 0.58	90.99 ± 0.38	88.84 ± 0.49	88.66 ± 0.60	86.90 ± 0.74	89.21 ± 0.30	$\mathbf{90.99 \pm 0.42}$
16	Giant panda vs. Rat	88.04 ± 0.46	91.05 ± 0.20	89.66 ± 0.46	87.53 ± 0.51	88.76 ± 0.37	89.13 ± 0.25	$\mathbf{91.82 \pm 0.36}$
17	Giant panda vs. Seal	91.99 ± 0.31	92.35 ± 0.44	90.43 ± 0.31	92.40 ± 0.40	93.32 ± 0.31	$\mathbf{93.81 \pm 0.19}$	93.37 ± 0.35
18	Leopard vs. Persian cat	94.25 ± 0.28	94.45 ± 0.28	95.03 ± 0.27	95.26 ± 0.25	95.26 ± 0.22	94.97 ± 0.22	$\mathbf{95.41 \pm 0.22}$
19	Leopard vs. Pig	87.67 ± 0.30	87.67 ± 0.41	87.83 ± 0.33	$\mathbf{88.90 \pm 0.28}$	85.34 ± 0.50	87.31 ± 0.21	87.83 ± 0.43
20	Leopard vs. Hippopotamus	92.96 ± 0.37	94.13 ± 0.28	93.31 ± 0.29	92.86 ± 0.26	92.54 ± 0.28	92.71 ± 0.16	$\mathbf{94.48 \pm 0.27}$
21	Leopard vs. Humpback whale	98.68 ± 0.18	98.68 ± 0.16	98.97 ± 0.18	98.63 ± 0.23	98.83 ± 0.11	98.61 ± 0.26	$\mathbf{98.97 \pm 0.14}$
22	Leopard vs. Raccoon	77.70 ± 0.57	80.44 ± 0.71	79.42 ± 0.58	79.84 ± 0.59	81.31 ± 0.67	80.12 ± 0.22	$\mathbf{82.24 \pm 0.72}$
23	Leopard vs. Rat	89.07 ± 0.35	90.64 ± 0.27	89.32 ± 0.32	89.27 ± 0.28	89.93 ± 0.28	90.13 ± 0.21	$\mathbf{90.75 \pm 0.37}$
24	Leopard vs. Seal	93.60 ± 0.38	93.58 ± 0.30	94.03 ± 0.42	94.30 ± 0.36	94.12 ± 0.21	$\mathbf{95.18 \pm 0.33}$	93.72 ± 0.32
25	Persian cat vs. Pig	81.32 ± 0.41	81.32 ± 0.47	82.01 ± 0.44	81.68 ± 0.46	$\mathbf{82.60 \pm 0.58}$	82.27 ± 0.24	82.01 ± 0.32
26	Persian cat vs. Hippopotamus	92.79 ± 0.20	92.22 ± 0.35	91.73 ± 0.35	92.82 ± 0.30	92.00 ± 0.49	92.38 ± 0.32	$\mathbf{93.09 \pm 0.37}$
27	Persian cat vs. Humpback whale	95.71 ± 0.30	94.60 ± 0.46	96.49 ± 0.31	95.84 ± 0.30	97.36 ± 0.15	$\mathbf{97.42 \pm 0.25}$	96.49 ± 0.31
28	Persian cat vs. Raccoon	90.70 ± 0.41	89.72 ± 0.49	91.55 ± 0.28	90.38 ± 0.39	$\mathbf{91.72 \pm 0.34}$	91.24 ± 0.18	90.93 ± 0.67
29	Persian cat vs. Rat	68.99 ± 0.66	72.05 ± 0.63	68.04 ± 0.84	69.07 ± 0.48	69.62 ± 0.84	$\mathbf{70.49 \pm 0.45}$	69.89 ± 0.59
30	Persian cat vs. Seal	86.38 ± 0.45	85.68 ± 0.44	86.23 ± 0.47	85.66 ± 0.49	88.38 ± 0.44	$\mathbf{88.41 \pm 0.36}$	85.67 ± 0.50
31	Pig vs. Hippopotamus	74.39 ± 0.65	74.39 ± 0.70	76.57 ± 0.47	75.57 ± 0.58	$\mathbf{77.75 \pm 0.51}$	73.42 ± 0.12	76.57 ± 0.53
32	Pig vs. Humpback whale	95.79 ± 0.40	95.79 ± 0.22	95.70 ± 0.29	95.93 ± 0.37	96.85 ± 0.18	$\mathbf{95.93 \pm 0.12}$	95.70 ± 0.36
33	Pig vs. Raccoon	78.65 ± 0.88	78.65 ± 0.76	79.68 ± 0.65	79.13 ± 0.63	81.61 ± 0.71	$\mathbf{82.19 \pm 0.15}$	79.68 ± 0.67
34	Pig vs. Rat	70.10 ± 0.69	70.10 ± 0.64	70.48 ± 0.55	70.77 ± 0.73	72.47 ± 0.55	$\mathbf{73.31 \pm 0.25}$	70.48 ± 0.60
35	Pig vs. Seal	76.74 ± 0.67	76.74 ± 0.65	79.71 ± 0.65	79.26 ± 0.77	82.61 ± 0.55	$\mathbf{83.11 \pm 0.43}$	79.71 ± 0.59
36	Hippopotamus vs. Humpback whale	91.31 ± 0.69	91.31 ± 0.62	90.42 ± 0.62	$\mathbf{92.17 \pm 0.44}$	91.08 ± 0.63	90.11 ± 0.28	90.42 ± 0.54
37	Hippopotamus vs. Raccoon	85.72 ± 0.43	85.35 ± 0.43	87.05 ± 0.51	$\mathbf{85.84 \pm 0.70}$	85.72 ± 0.63	84.46 ± 0.36	84.10 ± 0.61
38	Hippopotamus vs. Rat	83.20 ± 0.53	89.73 ± 0.54	84.31 ± 0.36	85.62 ± 0.48	85.91 ± 0.48	86.11 ± 0.26	$\mathbf{90.41 \pm 0.21}$
39	Hippopotamus vs. Seal	67.86 ± 0.86	70.19 ± 0.68	68.23 ± 0.94	$\mathbf{70.83 \pm 0.79}$	69.79 ± 0.70	70.49 ± 0.41	70.45 ± 0.88
40	Humpback whale vs. Raccoon	96.98 ± 0.24	96.98 ± 0.21	97.46 ± 0.20	96.90 ± 0.29	97.34 ± 0.20	96.97 ± 0.27	$\mathbf{97.46 \pm 0.19}$
41	Humpback whale vs. Rat	94.54 ± 0.29	94.54 ± 0.21	94.58 ± 0.23	94.56 ± 0.22	92.95 ± 0.68	93.89 ± 0.19	$\mathbf{94.58 \pm 0.22}$
42	Humpback whale vs. Seal	84.04 ± 0.55	84.04 ± 0.50	84.37 ± 0.66	84.81 ± 0.38	85.91 ± 0.57	$\mathbf{86.13 \pm 0.17}$	84.37 ± 0.68
43	Raccoon vs. Rat	78.26 ± 0.48	82.45 ± 0.43	78.34 ± 0.46	78.61 ± 0.72	80.00 ± 0.57	79.63 ± 0.14	$\mathbf{82.98 \pm 0.49}$
44	Raccoon vs. Seal	90.49 ± 0.46	91.50 ± 0.44	91.61 ± 0.31	91.51 ± 0.40	89.21 ± 0.43	$\mathbf{91.63 \pm 0.36}$	89.19 ± 0.48
45	Rat vs. Seal	78.60 ± 0.45	73.87 ± 0.69	75.72 ± 0.75	$\mathbf{79.88 \pm 0.69}$	79.02 ± 0.50	79.21 ± 0.28	78.39 ± 0.99
	Average	87.32	87.87	87.72	87.93	88.13	88.39	**88.66**

Table 3. Complete mean classification accuracy and standard error results over 20 train/test splits on the INTERACT dataset [1]. Results highlighted with light purple indicate statistically significant improvement over the SVM MMD [6] method using the z-test.

	Interaction	SVM Images	Adaptive SVM	SVM+	SVM MMD [6]	Adaptive SVM+ (Linear Kernels)	Adaptive SVM+ (RBF Kernels)
1	carrying	96.07 ± 0.47	95.21 ± 0.47	97.64 ± 0.39	97.00 ± 0.36	**98.36 ± 0.31**	97.14 ± 0.31
2	catching	82.95 ± 1.20	80.68 ± 1.25	83.52 ± 0.60	**85.91 ± 1.10**	83.07 ± 1.13	88.18 ± 1.13
3	pushing	79.76 ± 1.27	79.52 ± 1.32	80.89 ± 1.00	79.19 ± 1.17	**83.06 ± 1.27**	83.31 ± 1.27
4	pulling	63.47 ± 1.22	65.40 ± 0.86	66.53 ± 1.08	66.85 ± 1.62	**66.97 ± 1.14**	70.89 ± 1.14
5	reaching for	67.00 ± 1.00	66.83 ± 0.79	66.42 ± 1.14	68.92 ± 1.49	**71.58 ± 1.26**	76.00 ± 1.26
6	jumping over	93.27 ± 0.76	91.92 ± 0.76	91.06 ± 0.87	90.67 ± 1.02	**93.85 ± 0.93**	94.04 ± 0.93
7	hitting	83.33 ± 0.90	83.06 ± 0.79	84.54 ± 0.83	84.17 ± 0.88	**85.09 ± 1.02**	85.56 ± 1.02
8	kicking	91.58 ± 0.66	92.25 ± 0.77	92.14 ± 0.70	92.33 ± 0.68	**92.42 ± 0.71**	92.33 ± 0.71
9	elbowing	85.68 ± 1.08	85.11 ± 1.03	83.86 ± 1.36	86.02 ± 1.01	**86.59 ± 1.20**	89.20 ± 1.20
10	tripping	87.80 ± 0.79	86.82 ± 1.04	**89.09 ± 0.77**	86.74 ± 0.88	86.52 ± 0.88	89.70 ± 0.88
11	waving at	70.76 ± 1.20	70.87 ± 1.27	69.13 ± 1.37	68.15 ± 1.66	**73.91 ± 1.45**	76.30 ± 1.45
12	pointing at	76.47 ± 1.03	76.72 ± 1.08	73.36 ± 1.29	74.74 ± 1.06	**80.52 ± 1.06**	85.69 ± 1.06
13	pointing away from	66.25 ± 1.52	66.25 ± 1.10	68.00 ± 1.50	**68.50 ± 1.97**	65.63 ± 1.07	73.63 ± 1.07
14	looking at	65.16 ± 1.60	65.97 ± 1.06	66.69 ± 1.46	66.45 ± 1.05	**68.63 ± 1.15**	76.61 ± 1.15
15	looking away from	72.11 ± 1.14	73.44 ± 1.15	73.83 ± 1.23	73.05 ± 0.96	**74.38 ± 1.38**	78.59 ± 1.38
16	laughing at	72.73 ± 1.32	74.61 ± 1.01	72.19 ± 0.97	74.30 ± 0.95	**76.48 ± 1.11**	81.17 ± 1.11
17	laughing with	80.10 ± 1.36	81.04 ± 1.09	79.69 ± 1.11	79.38 ± 1.20	**82.29 ± 1.48**	86.88 ± 1.48
18	hugging	88.28 ± 0.94	87.81 ± 0.95	87.98 ± 1.06	87.97 ± 0.97	**88.52 ± 0.90**	86.80 ± 0.90
19	wrestling with	90.68 ± 0.89	90.80 ± 0.73	**92.16 ± 1.01**	90.45 ± 0.61	90.68 ± 0.80	91.36 ± 0.80
20	dancing with	80.88 ± 0.95	82.94 ± 1.06	84.26 ± 0.83	8**4.41 ± 0.60**	84.12 ± 0.96	88.09 ± 0.96
21	holding hands with	86.82 ± 1.06	85.08 ± 0.96	86.37 ± 0.85	86.45 ± 0.80	**86.94 ± 0.93**	88.31 ± 0.93
22	shaking hands with	95.78 ± 0.69	90.09 ± 0.94	96.12 ± 0.44	**96.55 ± 0.47**	94.83 ± 0.49	95.43 ± 0.49
23	talking with	75.07 ± 1.09	78.60 ± 1.18	77.43 ± 1.34	**81.91 ± 0.91**	81.69 ± 0.75	83.97 ± 0.75
24	arguing with	84.48 ± 0.90	83.97 ± 0.98	81.81 ± 1.09	85.00 ± 0.75	**85.17 ± 0.92**	88.97 ± 0.92
25	walking with	92.61 ± 0.89	91.82 ± 1.00	92.50 ± 0.68	**93.75 ± 0.75**	89.20 ± 1.11	94.89 ± 1.11
26	running with	91.00 ± 0.82	89.33 ± 0.77	88.75 ± 0.98	**91.08 ± 0.64**	89.50 ± 0.87	92.17 ± 0.87
27	crawling with	83.10 ± 1.13	**85.36 ± 1.35**	84.17 ± 1.18	84.76 ± 1.51	83.57 ± 1.13	84.40 ± 1.13
28	jumping with	**85.96 ± 1.13**	85.19 ± 1.31	83.27 ± 1.64	82.88 ± 1.40	84.42 ± 1.45	86.73 ± 1.45
29	walking to	80.27 ± 1.25	78.75 ± 1.20	78.21 ± 1.08	81.52 ± 0.92	**84.11 ± 1.10**	80.00 ± 1.10
30	running to	76.64 ± 1.27	76.17 ± 0.74	78.91 ± 0.86	77.66 ± 1.03	**78.36 ± 0.89**	78.44 ± 0.89
31	crawling to	81.70 ± 1.27	81.07 ± 1.17	78.84 ± 0.69	82.41 ± 0.79	**83.93 ± 1.15**	83.57 ± 1.15
32	jumping to	80.43 ± 1.21	81.72 ± 1.09	78.88 ± 1.30	**81.81 ± 1.04**	81.64 ± 0.92	82.16 ± 0.92
33	walking away from	76.85 ± 0.98	75.56 ± 0.84	78.63 ± 1.14	77.98 ± 0.97	**80.00 ± 1.01**	78.55 ± 1.01
34	running away from	84.38 ± 1.10	82.95 ± 1.20	83.75 ± 0.95	**85.71 ± 0.92**	83.21 ± 1.11	81.70 ± 1.11
35	crawling away from	79.66 ± 1.47	77.27 ± 1.04	**80.34 ± 1.07**	80.11 ± 0.91	79.77 ± 1.22	82.39 ± 1.22
36	jumping away from	81.48 ± 1.30	82.34 ± 0.95	**85.78 ± 1.01**	85.23 ± 0.93	85.39 ± 0.83	85.47 ± 0.83
37	walking after	85.40 ± 1.18	82.70 ± 1.30	**88.10 ± 1.32**	86.50 ± 0.85	86.90 ± 0.87	83.20 ± 0.87
38	running after	82.42 ± 0.85	82.35 ± 1.13	82.58 ± 0.85	83.56 ± 0.81	**83.94 ± 1.09**	80.68 ± 1.09
39	crawling after	**86.90 ± 1.15**	86.43 ± 1.43	86.31 ± 1.09	85.12 ± 1.18	83.21 ± 1.47	85.00 ± 1.47
40	jumping after	83.25 ± 0.95	82.75 ± 0.79	84.67 ± 1.00	**85.58 ± 0.68**	85.08 ± 0.85	85.08 ± 0.85
41	walking past	80.00 ± 0.85	79.04 ± 1.11	80.51 ± 1.03	**80.59 ± 1.05**	80.22 ± 0.80	80.59 ± 0.80
42	running past	73.44 ± 0.85	**75.86 ± 1.12**	75.70 ± 0.91	75.62 ± 0.81	73.36 ± 1.10	79.92 ± 1.10
43	crawling past	77.02 ± 1.25	78.41 ± 1.57	77.62 ± 1.44	78.10 ± 0.95	**78.57 ± 1.47**	82.02 ± 1.47
44	jumping past	76.02 ± 1.27	77.50 ± 1.37	78.06 ± 1.14	**78.61 ± 1.50**	77.96 ± 1.27	79.54 ± 1.27
45	standing next to	82.28 ± 1.26	84.13 ± 1.17	84.13 ± 1.12	**86.63 ± 1.03**	84.13 ± 1.07	89.46 ± 1.07
46	sitting next to	83.67 ± 1.02	82.89 ± 0.87	82.50 ± 0.94	83.98 ± 1.07	**84.12 ± 0.75**	86.02 ± 0.75
47	lying next to	71.72 ± 1.22	70.86 ± 1.22	74.31 ± 1.32	**74.66 ± 1.05**	73.10 ± 0.93	73.62 ± 0.93
48	crouching next to	77.81 ± 1.51	75.00 ± 1.50	80.16 ± 1.73	**80.62 ± 0.93**	78.59 ± 1.38	80.00 ± 1.38
49	standing in front of	69.21 ± 1.21	70.89 ± 1.35	69.79 ± 1.15	71.43 ± 0.92	**71.71 ± 1.53**	77.93 ± 1.53
50	sitting in front of	78.56 ± 1.01	76.52 ± 1.15	77.95 ± 1.02	**78.64 ± 1.08**	77.88 ± 1.09	80.30 ± 1.09
51	lying in front of	80.60 ± 0.92	80.43 ± 0.97	81.72 ± 1.58	81.64 ± 1.10	**83.02 ± 1.09**	83.10 ± 1.09
52	crouching in front of	85.11 ± 1.08	82.05 ± 1.58	84.89 ± 0.93	**86.70 ± 1.16**	82.27 ± 1.37	87.39 ± 1.37
53	standing behind	68.36 ± 1.53	67.07 ± 1.25	67.50 ± 1.12	72.33 ± 1.11	**73.28 ± 1.23**	79.22 ± 1.23
54	sitting behind	89.60 ± 0.66	90.00 ± 0.89	90.56 ± 0.54	88.87 ± 0.61	**90.97 ± 0.77**	89.60 ± 0.77
55	lying behind	81.67 ± 1.04	80.83 ± 1.13	80.91 ± 1.06	**83.33 ± 1.10**	80.83 ± 0.83	84.09 ± 0.83
56	crouching behind	77.22 ± 1.45	73.80 ± 1.32	76.39 ± 1.33	**78.15 ± 0.61**	75.46 ± 1.43	78.98 ± 1.43
57	standing with	78.47 ± 1.05	78.31 ± 1.09	82.98 ± 0.85	80.48 ± 1.24	**83.47 ± 1.09**	84.27 ± 1.09
58	sitting with	82.08 ± 1.28	81.31 ± 1.04	80.00 ± 1.39	80.36 ± 1.18	**82.14 ± 1.20**	84.40 ± 1.20
59	lying with	70.25 ± 1.31	69.50 ± 1.40	70.67 ± 1.30	71.42 ± 1.31	**73.83 ± 1.25**	75.58 ± 1.25
60	crouching with	78.80 ± 1.07	81.41 ± 1.05	81.30 ± 1.25	81.74 ± 1.17	**83.80 ± 0.94**	83.50 ± 0.94
	Average	80.51	80.21	80.93	81.58	**81.87**	83.87