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# Fast and Scalable Training of Semi-Supervised CRFs with Application to Activity Recognition

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## Supporting Material

### 1 Classification accuracies for the activity recognition datasets

<i>Class</i>	<i>Average Accuracy (%)</i>		
	ML+all obs	ML+Boost	VEB
Sitting	74.1 ± 5.2	84.8 ± 3.3	86.8 ± 5.1
Standing	68.7 ± 4.6	84.2 ± 3.1	89.6 ± 5.2
Walking	84.5 ± 3.1	89.7 ± 2.4	93.7 ± 3.8
Walking up stairs	74.2 ± 2.8	86.5 ± 1.9	95.3 ± 3.4
Walking-down-stairs	80.9 ± 2.5	85.3 ± 2.3	92.5 ± 2.4
Riding elevator down	76.3 ± 2.7	83.6 ± 1.5	95.1 ± 3.1
Riding elevator up	79.4 ± 2.2	84.7 ± 1.7	96.8 ± 1.9
Brushing teeth	84 ± 1.8	90.3 ± 1.3	98.2 ± 1.7

Table 1: Average class accuracy ± 95% confidence interval of supervised algorithms on dataset 1.

<i>Class</i>	<i>Average Accuracy (%)</i>		
	ML+all obs	ML+Boost	VEB
Sitting	75.9 ± 3.5	82.5 ± 3.5	82.5 ± 3.8
Standing	68.1 ± 4.2	77.4 ± 5.2	77.4 ± 5.7
Walking	75 ± 4.8	79.6 ± 4.6	79.6 ± 4.1
Walking up stairs	76.4 ± 2.1	84.2 ± 2.4	84.2 ± 2.9
Walking-down-stairs	78.6 ± 2.2	83.9 ± 2	83.9 ± 2.5
Riding elevator down	75.2 ± 2.4	84.4 ± 2.6	84.4 ± 3.1
Riding elevator up	78.7 ± 2.1	85.1 ± 2.9	85.1 ± 3.2
Brushing teeth	83.1 ± 1.5	89.8 ± 1.4	89.8 ± 2.3

Table 2: Average class accuracy ± 95% confidence interval of semi-supervised algorithms on dataset 1.

<i>Class</i>	<i>Average Accuracy (%)</i>		
	ML+all obs	ML+Boost	VEB
Computer usage	88.1 ± 3.6	88.6 ± 3.4	92.1 ± 4.4
Having meal	83.7 ± 2.5	89.2 ± 2.9	96.9 ± 4.9
Meeting	84.3 ± 4.2	85.1 ± 4.5	88.6 ± 5.6
Watching TV	85.4 ± 2.9	86 ± 2.7	92.7 ± 4
Sleeping	87.2 ± 2.1	87.9 ± 2.3	97.4 ± 3.9

Table 3: Average class accuracy ± 95% confidence interval of supervised algorithms on dataset 2.

<i>Class</i>	<i>Average Accuracy (%)</i>		
	ML+all obs	ML+Boost	VEB
Computer usage	75.4 ± 3.1	78.8 ± 2.5	81.6 ± 3.9
Having meal	72.9 ± 2.5	74.3 ± 3.2	90.9 ± 4.1
Meeting	71.3 ± 5.5	70.1 ± 4.8	84.5 ± 4.5
Watching TV	74.1 ± 4.3	73.9 ± 3.1	83.7 ± 5.1
Sleeping	80.6 ± 2.9	85.6 ± 2.4	94.9 ± 2.6

Table 4: Average class accuracy ± 95% confidence interval of semi-supervised algorithms on dataset 2.