Fourth iteration

Table 1. Validation scores.

Segment size	Number of trees	Accuracy	Precision(micro)	Recall(micro)
12.1	93	0.96	0.96	0.96
8.9	171	0.94	0.94	0.94
7.0	203	0.95	0.95	0.95

Table 2. K-fold cross-validation scores on dataset. Datasets exist of training and validation data

Segment size	Number of trees	Accuracy	Precision(micro)	Recall(micro)
12.1	93	0.82 ± 0.05	0.84 ± 0.04	0.82 ± 0.05
8.9	171	0.82 ± 0.04	0.84 ± 0.04	0.82 ± 0.04
7.0	203	0.83 ± 0.04	0.84 ± 0.04	0.83 ± 0.04

Table 3. Test dataset (3 subjects)

Segment size	Number of trees	Accuracy	Precision	Recall
12.1	93	0.85	0.85	0.85
8.9	171	0.86	0.86	0.86
7.0	203	0.84	0.84	0.84

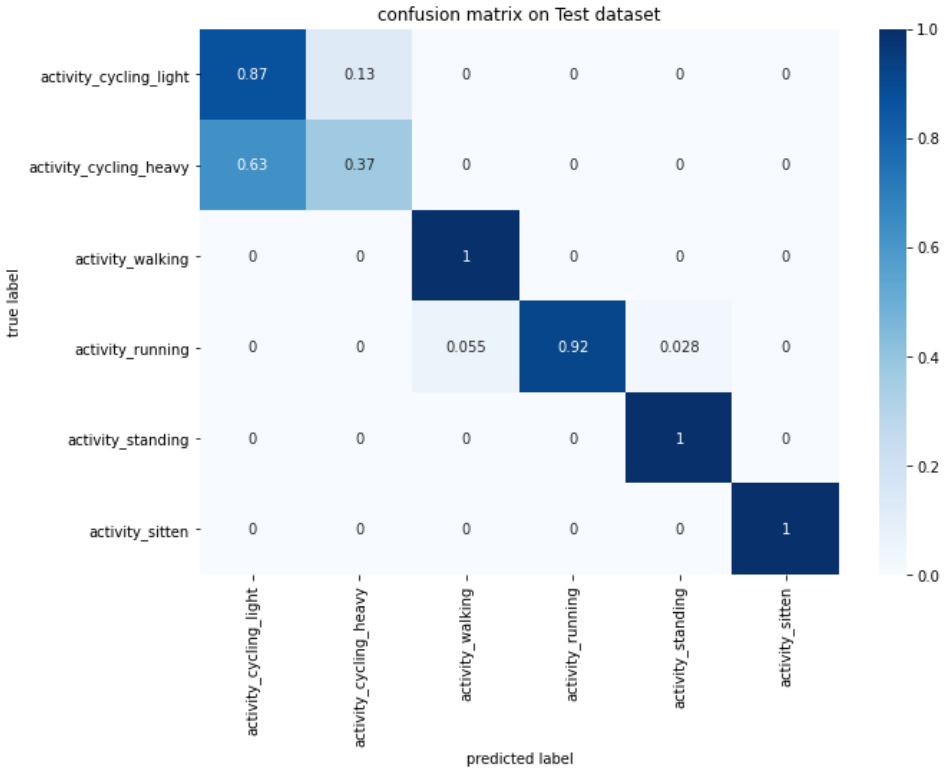

Figure 1: Confusion matrix on test dataset with data segmented in 8.9 seconds.

Based on the experiments with the segment size as describe in chapter Activity Classification of Methods it was concluded that with this dataset 7.0, 8.9 and 12.1 seconds are the best time segment sizes. For each segment size number of trees was decided with experiment as described in chapter {}. The experiment resulted in 93 trees for 12.1 seconds, 171 trees for 8.9 seconds and 203 trees for 7 seconds. The results of each segment size for the validation dataset are described in Table 1, the cross-validation results are described in Table 2 and in Table 3 the Test dataset are in Table 3. The ability of the RF model to distinct activities from each other are presented in figure 1

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