

Questions	Possible answers with individual scores				
	(1) Never	(2) Sometimes	(3) Regularly	(4) Often	(5) Always
1. I am bothered by fatigue					
2. I get tired very quickly					
3. I don't do much during the day					
4. I have enough energy for everyday life					
5. Physically, I feel exhausted					
6. I have problems to start things					
7. I have problems to think clearly					
8. I feel no desire to do anything					
9. Mentally, I feel exhausted					
10. When I am doing something, I can concentrate quite well					

Figure S1. Questions conforming the self-reported FAS questionnaire, and the possible answers with their individual scores. The total FAS score is obtained by summing the scores of each question (note that questions 4 and 10 must be inversely scored).

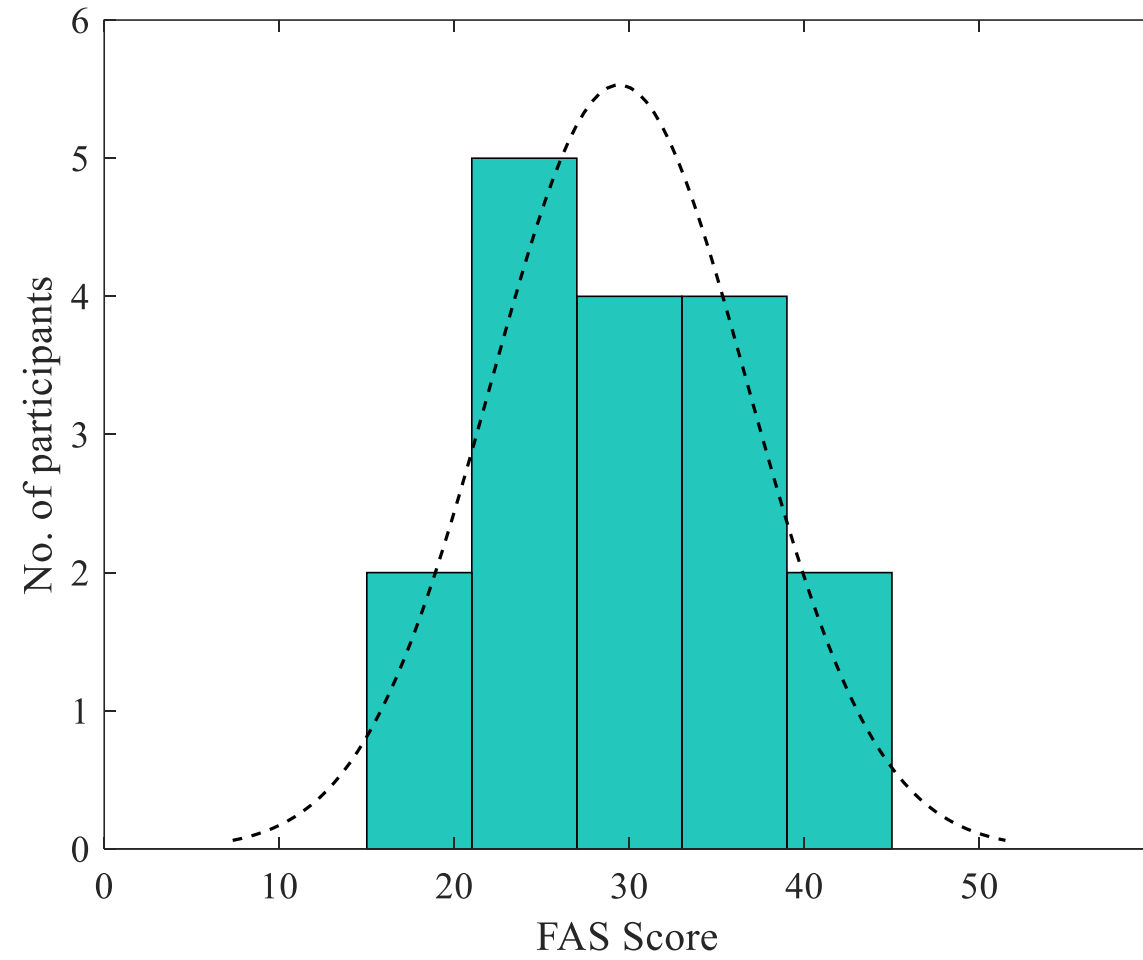


Figure S2. Distribution of FAS Scores obtained for all 17 participants during the Fatigue Assessment stage.

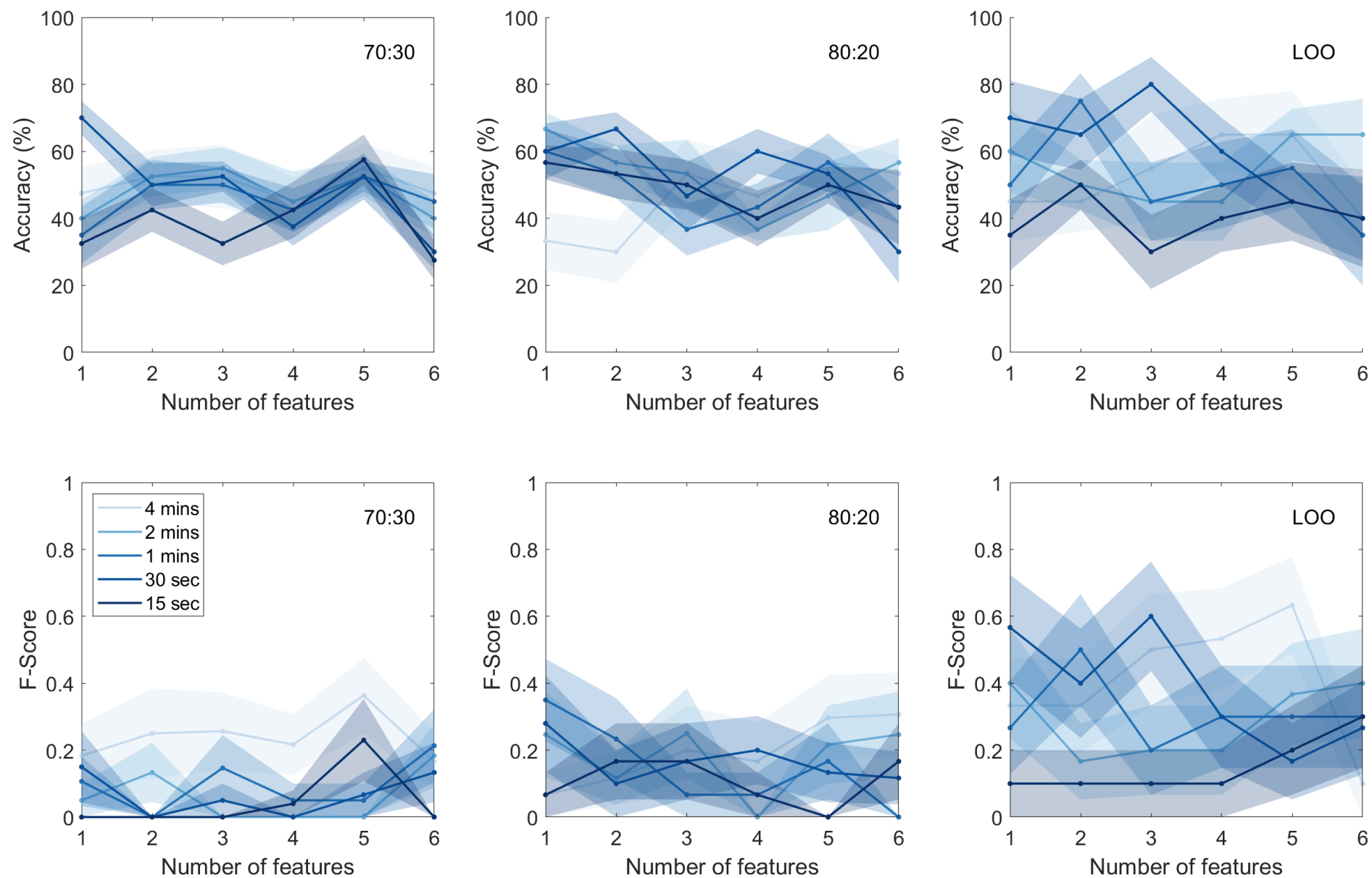


Figure S3. Average classification accuracies (top) and F-Scores (bottom) for the E4 model ( $K = 6$  features) using 4, 2, 1 (min), 30 and 15 (sec) of data during the AO task. Shaded area represents standard error across cross-validations. Model performance was evaluated using 70:30 (left), 80:20 (middle) and LOO (right) data splitting approaches.

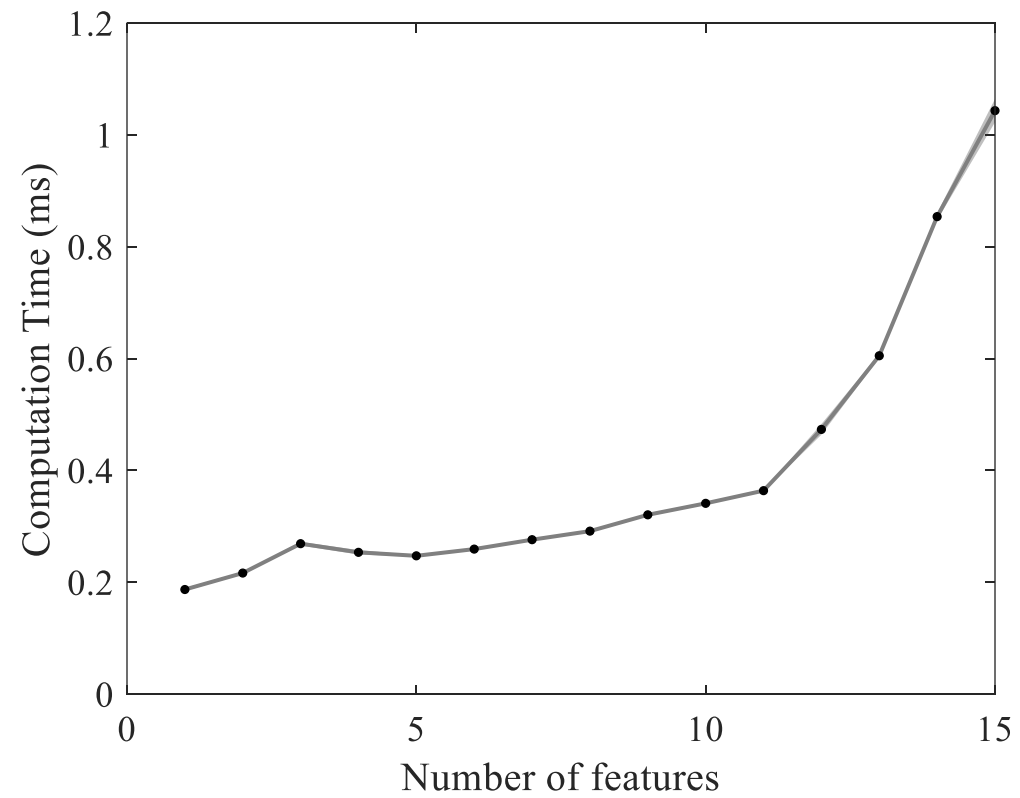


Figure S4. Average computation time needed to real-time make predictions using the one-minute (most accurate) EEG model. One hundred simulations were run, and the shaded area represents the standard error across the simulations.