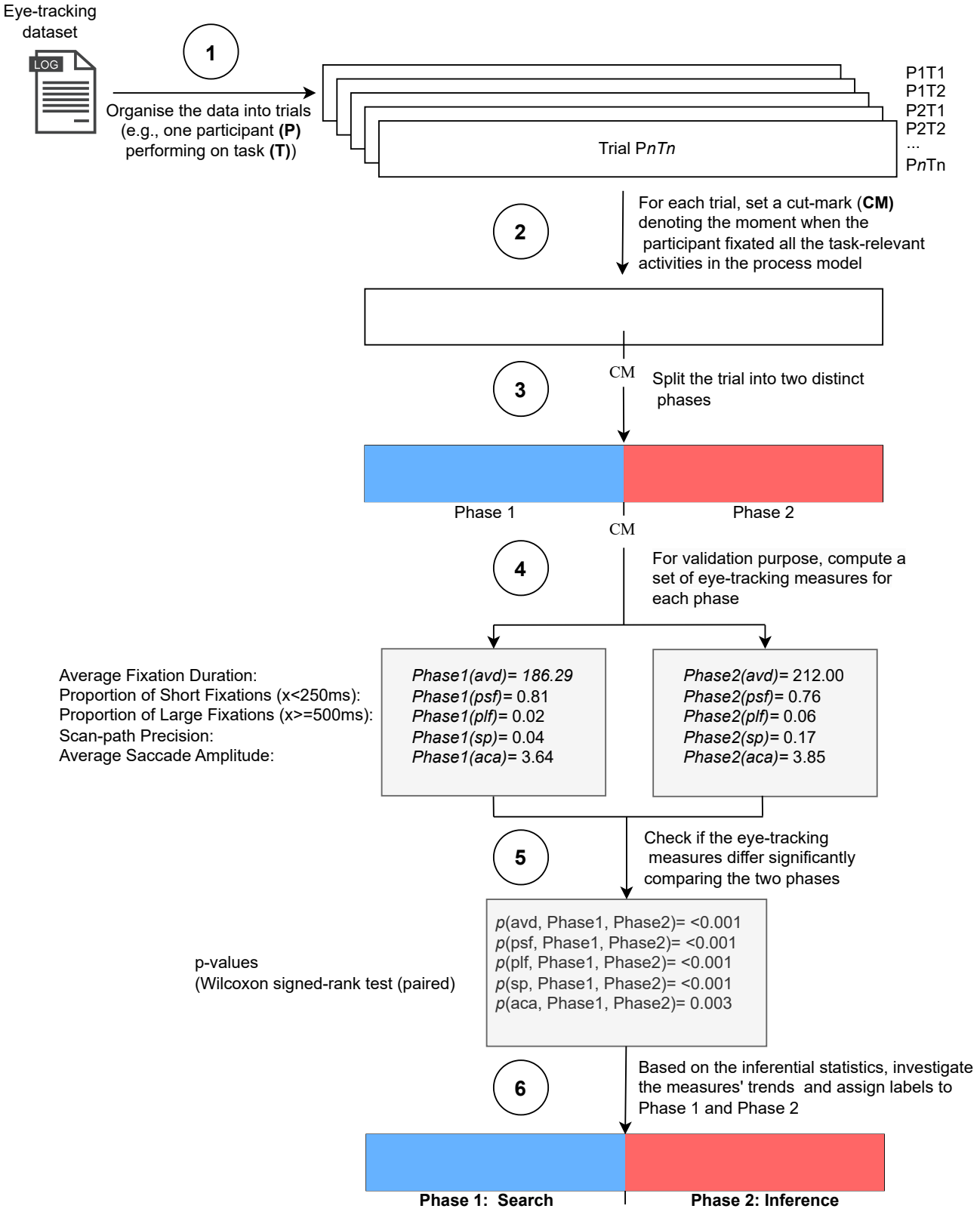
Eye-tracking dataset
LOG
1
Organise the data into trials (e.g., one participant (P) performing on task (T))
Trial PnTn
P1T1
P1T2
P2T1
P2T2
...
PnTn
2
For each trial, set a cut-mark (CM) denoting the moment when the participant fixated all the task-relevant activities in the process model
CM
3
Split the trial into two distinct phases
Phase 1
Phase 2
CM
4
For validation purpose, compute a set of eye-tracking measures for each phase
Average Fixation Duration:
Proportion of Short Fixations (x<250ms):
Proportion of Large Fixations (x>=500ms):
Scan-path Precision:
Average Saccade Amplitude:
Phase1(avd)= 186.29
Phase1(psf)= 0.81
Phase1(plf)= 0.02
Phase1(sp)= 0.04
Phase1(aca)= 3.64
Phase2(avd)= 212.00
Phase2(psf)= 0.76
Phase2(plf)= 0.06
Phase2(sp)= 0.17
Phase2(aca)= 3.85
5
Check if the eye-tracking measures differ significantly comparing the two phases
p-values
(Wilcoxon signed-rank test (paired)
p(avd, Phase1, Phase2)= <0.001
p(psf, Phase1, Phase2)= <0.001
p(plf, Phase1, Phase2)= <0.001
p(sp, Phase1, Phase2)= <0.001
p(aca, Phase1, Phase2)= 0.003
6
Based on the inferential statistics, investigate the measures' trends and assign labels to Phase 1 and Phase 2
Phase 1: Search
Phase 2: Inference