

# Process Variant Analysis Across Continuous Features: A Novel Framework – supplementary material

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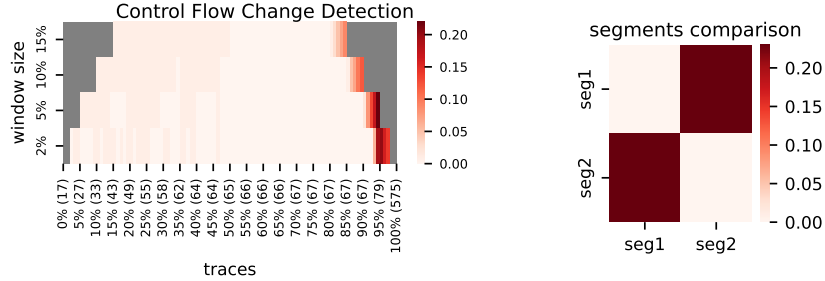
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## 1 Case Study

### 1.1 A deeper analysis considering accepted cases

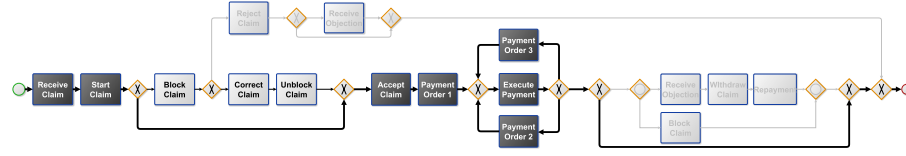
The derived segments for the accepted cases are shown in Fig. 1. Based on Fig. 1a considering  $w = 2$  and  $\theta = 0.1$ , two segments are found, with duration periods of  $[0,79]$  days and  $[80,575]$  days. The two segments are compared to each other in Fig. 1b and the results show that they are significantly different considering  $\theta = 0.1$ .



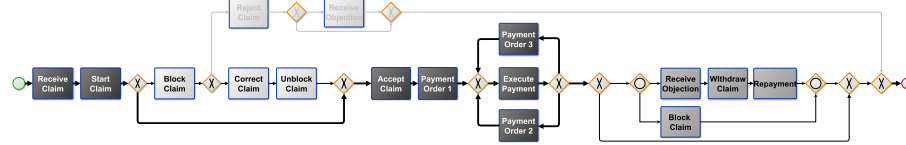
(a) Control flow change detection with  $b=100$  and (b) Segmentation and pairwise comparison.  $w \in \{2, 5, 10, 15\}$ .

Fig. 1: Applying our framework to the accepted cases in the UWV event log.

The colored normative models in Fig. 2 illustrate the difference between the process models related to the two segments. The main difference between *segment 1* shown in Fig. 2a and *segment 2* shown in Fig. 2b is whether an objection is received or not. Receiving an objection is correlated with a duration of 80 days or more. The value of 80 is not a coincidence. The process has a maximum duration of 13 weeks, i.e., 91 days. To be on the safe side the internal deadline is set to 12 weeks, i.e., 84 days. It is clear that UWV has strongly focused on meeting this internal deadline.



(a) Segment 1 in the accepted cases event log with duration in the range  $[0,79]$  days.



(b) Segment 2 in the accepted cases event log with duration in the range  $[80,575]$  days.

Fig. 2: The normative BPMN model highlighted based on the frequency of the transitions in replaying the segments from the accepted event log experiment.