

From low-level events to activities : a pattern-based approach

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From Low-Level Events to Activities - A Pattern-based Approach (Extended Abstract)

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Abstract: This extended abstract summarizes our work published in [Ma16b]. We present a supervised abstraction method that is based on behavioral activity patterns, which capture domain knowledge on the relation between activities and events. We abstract low-level events based on an alignment between activity patterns and traces of the low-level event log.

Keywords: Process Mining; Supervised Abstraction; Event Log; Alignment

Organizations use information systems to support their work. Often, information about the usage of those systems by workers is recorded in event logs. Process mining techniques use such event data to analyze processes of organizations. It is assumed that recorded events correspond to meaningful activities executed for instances of a process (i.e., cases) [Aa16]. The ability to identify executions of activities based on events is crucial for any process mining technique. Events that do not directly correspond to activities recognizable for process workers are unsuitable for process analytics, since their semantics are not clear to domain experts. However, events recorded by information systems often do not directly correspond to recognizable executions of activities [BMW14; GRA10]. This extended abstract summarizes our contribution of a supervised event abstraction method that was published in [Ma16b].

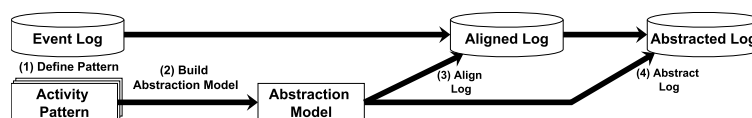


Fig. 1: Overview of the proposed event abstraction method

An overview of the four main steps of the proposed abstraction method is given in Fig. 1.

1. We model multi-perspective behavioral **activity patterns** in form of Data Petri

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