


ASSRI'17 Submission 19

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Submission 19

Title	Learning Planning Model for Semantic Process Compensation
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Abstract	Recent advancements in business process conformance analysis have shown that the detection of non-conformance states can be learned with checking inconsistencies between a process model and its historical execution log, despite their real behavior. A key challenge in managing business processes is compensating structural nonconformance states. The concentration of this work is on the hardest aspect of the challenge, where the process might be structurally conformant, but it does not achieve an effect conform to what is required by design. In this work, we propose learning planning model to address the compensation of semantically non-conformance states. Our work departs from the integration of two well-known Artificial intelligence (AI) paradigms, Machine Learning (ML) and Automated Planning (AP). Learning model is divided into two sub-models to address two planning problems: learning predictive model that provides the planner with the ability of responding to violation points during the execution of the process model, and instance-based learning model that provides the planner with a compensation based on the nearest class when there are no compensations perfectly fit to handle the violation point.
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Authors

first name	last name	email	country	affiliation	Web page	corresponding?
Ahmad	Alelaimat	aama963@uowmail.edu.au	Australia	University of Wollongong	http://www.uow.edu.au	✓
Metta	Santiputri	ms804@uowmail.edu.au	Australia	University of Wollongong	http://www.uow.edu.au	
Yingzhi	Gou	yg452@uowmail.edu.au	Australia	University of Wollongong	http://www.uow.edu.au	
Aditya	Ghose	aditya@uow.edu.au	Australia	University of Wollongong	https://www.uow.edu.au/index.html	

