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Process Mining: Why You Need It?

Vishal Shah
Central Michigan University, shah3v@cmich.edu

Elsa Welshofer
Celonis, e.welshofer@celonis.com

Andrew Lieberman
Celonis, a.lieberman@celonis.com

Jerome Geyer-Klingeberg
Celonis SE, j.geyerklingeberg@celonis.com

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TREO Talk Paper

Vishal Shah
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shah3v@cmich.edu

Elsa Welshofer
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Jerome Geyer-Klingeberg
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Abstract

For as long as Information Systems (IS) field has existed, it has had an active interesting understanding and enhancing organizational as well as business processes. In 1970's the research focused on streamlining processes for administrative control and to improve banking operations. The term Business Process Management (BPM) and Business Process Reengineering (BPR) has since evolved and often used as a catch-all terms for a variety of domains dealing with process orientation. Information System has often struggled to explain interaction of business value, processes, and IT systems. The results of IT investments on productivity and business value have been mixed and inconclusive and the theoretical lens behind these studies remain fragmented.

Emergence of the new set of techniques, namely process mining has the potential unlock the mechanism behind value creation enabled by information systems as well as explain it from a theoretical standpoint. It can open new possibilities for businesses as well as IS discipline and modify its approach to BPM/BPR from teaching and research standpoint. Process mining promises to go beyond traditional Business Process Modeling Notation (BPMN) and Lean/Six Sigma approaches. The potential of process mining lies in the fact that it leverages the underlying information systems like Enterprise Resource Planning (ERP). Instead of guessing or deducting business processes in an abstract manner, businesses now can discover/reverse-engineer their process flow and find deviations from the desired flow. Commercial applications have given rise to firms like Celonis, Signavio and many others. This TREO talk is aimed at making IS academics aware of this rapidly growing field and opportunities and challenges it preset to Information Systems (IS) in terms of research and teaching. The presentation will focus on evolution of process mining, avenues to get involved in process mining research, and diverse ways to incorporate in IS curriculum to bolster and future-proof B-school course offerings.

References

Badakhshan, P., Geyer-Klingeberg, J., El-Halaby, M., Lutzeyer, T., and Affonseca, G. V. L. (2020). Celonis process repository: A bridge between business process management and process mining in BPM (PhD/Demos),67-71.

Davenport and Sanyi (2019). What process mining is, and why companies should so it. *Harvard Business Review,* 97, 2.

Eid-Sabbagh, R. H., Hewelt, M., and Weske, M. (2013). A tool for business process architecture analysis. *Proceedings of International Conference on Service-Oriented Computing, December Springer, Berlin, Heidelberg,* December,688–691.

Marcinkowski, B. (1970). Applying business process modeling techniques: Case study. *The Journal of Internet Banking and Commerce,* 15, 3, 1-12.

Soh, C., and Markus, M. L. (1995). How IT creates business value: A process theory synthesis. *Proceedings of International Conference on Information Systems, December*, 29-41,

Williams, S. (1967). Business process modeling improves administrative control. *Automation, 44,* 50.