Artificial Intelligence Meets
Business Process Management:
Challenges, Opportunities, and Applications

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Abstract. In the past couple of centuries, humankind has achieved a
significant improvement in the quality of life of the world's population,
in large due to important advancements in the automation of wealth-
generating activities. Business Process Management (BPM) studies con-
cepts, methods, techniques, and tools that support and improve the way
business processes are designed, performed, and analyzed in organiza-
tions, including workflow automation and control of business processes
and decision-making practices. Artificial Intelligence (AI), in turn, strives
to automate natural intelligence exhibited by humans, including the per-
ception of the environment, taken decisions and actions, and learning and
problem-solving. In this keynote, the discussion investigates how results
in BPM inform and improve solutions to the problems addressed in AI,
and vice versa. To exemplify potential synergies of the two fields, the
keynote presents two concrete projects in the intersection of BPM and
AI that Dr. Polyvyanyy works on together with his colleagues and Ph.D.
students, namely applying the ideas from Process Mining, the subarea
of BPM, to tackle the problems of Robotic Process Automation [1] and
Goal Recognition [2] studied in AI. The screencast of the keynote is
publicly available.[1]

References

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2. Polyvyanyy, A., Su, Z., Lipovetzky, N., Sardiña, S.: Goal recognition using off-the-
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[1] https://youtu.be/vIFTgrnj468