

Discovering Business Processes from Email Logs using fastText and Process Mining

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Abstract

Communication has never been more accessible than today. With the help of Instant messengers and Email Services, millions of people can transfer information with ease, and this trend has affected organizations as well. There are billions of organizational emails sent or received daily, and their main goal is to facilitate the daily operation of organizations. Behind this vast corpus of human-generated content, there is much implicit information that can be mined and used to improve or optimize the organizations' operations. Business processes are one of those implicit knowledge areas that can be discovered from Email logs of an Organization, as most of the communications are followed inside Emails. The purpose of this research is to propose an approach to discover the process models in the Email log. In this approach, we combine two tools, supervised machine learning and process mining. With the help of supervised machine learning, fastText classifier, we classify the body text of emails to the activity-related. Then the generated log will be mined with process mining techniques to find process models. We illustrate the approach with a case study company from the oil and gas sector.

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0. Discovering Business Processes from Email Logs using fastText and Process Mining [Final v2 - preprint]
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