Decentralized predictive symbiotic corporate compliance mining

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Abstract

The paper shows an innovative approach called predictive symbiotic corporate compliance mining, that is an evolution of process mining that not consider the log of a single company but a symbiotic mining of a corporate process, considering the historical and actual log of events of some companies that work in a field/business in a symbiotic approach, taking into account the national and regulatory context of reference. This evaluation consider the impact relation of each company united to a semantic mining related to the regulatory aspects using the web3 technologies. The module of process mining is implemented with a decentralized infrastructure (DApp) to collect and certify the log to reveals critical issues of the group. This decentralized approach is also applied for the development of a semantic infrastructure used to analyse the performance related to the environmental context and the compliance related to normative regulatory aspect and interpration, extracted from OSINT Open Data and recorded from SOCMINT data, thanks to a proof of reputation consensus mechanism.

Keywords

semantic infrastructure, symbiotic approach, DApp, SOCMINT, OSINT